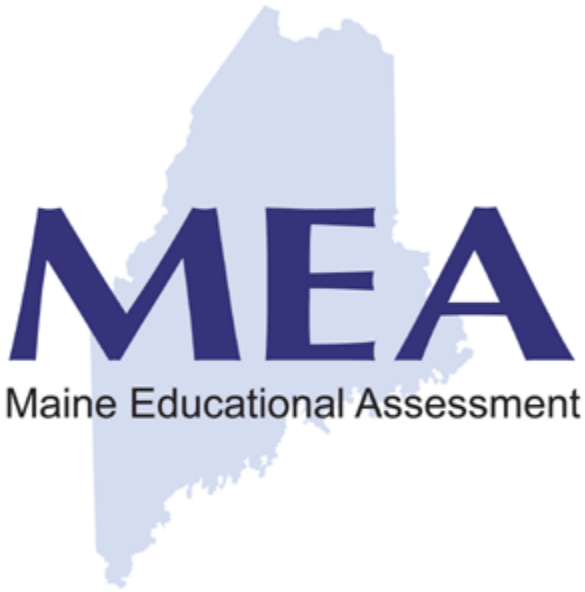

2002–2003 Technical Manual

Measured Progress

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CHAPTER 1—BACKGROUND AND OVERVIEW

PURPOSE OF THIS MANUAL

The purpose of this technical manual is to document the technical aspects of the 2002–2003 Maine Educational Assessment (MEA). In the fall of 2002, students in grades 4, 8, and 11 participated in the administration of the MEA in writing, reading, and health education. In the spring of 2003, students in grades 4, 8, and 11 were administered tests in mathematics, science and technology, social studies, and visual and performing arts. This report provides information about the technical quality of those assessments, including a description of the processes used to develop, administer, and score the tests and to analyze the test results. This report is intended to serve as a guide for replicating and/or improving the procedures in subsequent years.

While some parts of this technical report may be used by educated laypersons, the intended audience is experts in psychometrics and educational research. The report assumes a working knowledge of measurement concepts such as "reliability" and "validity," and statistical concepts such as "correlation" and "central tendency." In some chapters, the reader is presumed also to have basic familiarity with advanced topics in measurement and statistics.

LEARNING RESULTS

Following enactment of the Education Reform Act of 1984, Maine schools undertook a wide variety of initiatives designed to improve the quality of teaching and learning. Many of the lessons learned from those initiatives informed *Maine's Common Core of Learning*, a document published in 1990 that articulates a common vision for education in Maine by defining the knowledge, skills, and attitudes that all students should possess upon graduation from high school. In 1993, the Legislature directed the State Board of Education to undertake the next step in education reform by establishing a Task Force on *Learning Results* that was directed to

"develop long-range education goals and standards for school performance and student performance to improve learning results and recommend to the commissioner and to the Legislature a plan for achieving those goals and standards."

After substantial work, in January of 1996 the Task Force presented a report to the Legislature that contained a series of recommendations together with a set of standards, a plan for implementation, and proposed legislation. After a series of intense hearings during the 1996 Legislative Session, the Legislature adopted much of the work of the Task Force and directed the Department of Education and the State Board of Education to continue to develop the *Learning Results.*

Acting on the recommendations of the Task Force, the Legislature adopted six Guiding Principles that describe the characteristics of a well-educated person. To fulfill these principles, the Legislature required that the Department of Education and the State Board of Education develop *Learning Results* within the following eight areas:

Career Preparation
English Language Arts
Health and Physical Education
Mathematics
Modern and Classical Languages
Science and Technology
Social Studies
Visual and Performing Arts

These are not "subjects" in the same sense that the word is used when referring to courses in school. They are areas of learning that will in some cases cut across a number of discrete courses or disciplines. In response to the legislative directive, the Commissioner appointed a working group, known as the Critical Review Committee, to prepare a draft of standards for consideration by the State Board of Education and by the Legislature. The Committee met on numerous occasions during

the summer and fall of 1996 to produce this revised document, which was approved in May of 1997 by the 118th Legislature.

PURPOSES OF THE MEA

The *Learning Results* are just one part of an educational system. As goals for what all students should know and be able to do upon finishing school, they are not written to prescribe a minimum of "passing" standard. The setting of minimum requirements is the function of assessments that are separate from the creation of academic goals.

Because some students are ready for assessment at earlier stages than others, no assumption is made about when a standard might be achieved.

> "The statute passed in April of 1996 includes the following provisions relating to assessment: Student achievement of the learning results. . .must be measured by a combination of state and local assessments to measure progress and ensure accountability. The 4th-grade, 8th-grade, and 11th-grade results of the Maine Educational Assessment, the "MEA," are the state assessments used to measure achievement of the learning results. The 4th-grade and 8th-grade MEA must be used to measure achievement of the learning results beginning in the 1998-99 school year. Local school administrative units may develop additional assessments to measure achievement of the learning results, including student portfolios, performances, demonstrations, and other records of achievements."

An Assessment Design Team comprised of Maine educators and assessment specialists has been established to redesign state level assessments and to assist in the continuing development of high-quality local assessments that will be used to measure student achievement of the *Learning Results*. The statewide assessment system they are developing will

- align with Maine's *Learning Results;*
- utilize multiple measures of learning;
- ensure fair and equitable assessment for all students;

- utilize recognized, relevant technical standards for assessment;
- provide understandable information to educators, parents, students, the public, and the media;
- provide professional development opportunities for teachers, administrators, and future educators; and
- be practical and manageable.

ORGANIZATION OF THIS MANUAL

The organization of this manual is based on the conceptual flow of an assessment's life span; it begins with the initial test specification and addresses all the intermediate steps that lead to final score reporting. Section I covers the development of the MEA tests. It consists of eight chapters covering general design issues; the test development process; and the specific designs of the English language arts, mathematics, science and technology, social studies, visual and performing arts, and health education assessments. Section II consists of a single chapter describing the administration of the tests. Section III contains six chapters covering scoring, equating and scaling, item analysis, reliability, validity, and reporting. Section IV contains references and Section V contains the appendices.

SECTION I: ASSESSMENT DEVELOPMENT

CHAPTER 2—OVERVIEW OF TEST DESIGN

LEARNING RESULTS

MEA questions are directly linked to the **content standards** and **performance indicators** described in Maine's *Learning Results*. The content standards are the basis for the reporting categories developed for each subject area; the performance indicators are used to help guide the development of test questions. No other content or process is subject to statewide assessment. An item may address part, several, or all of the performance indicators.

ITEM TYPES

Maine's educators and students were familiar with the item types that were used in the 2002-03 assessment program as all had been previously introduced. The item types used and the functions of each are described below.

Multiple-choice items were used to provide breadth of coverage of a subject area. Because they require no more than a minute for most students to answer, these items make efficient use of limited testing time and allow coverage of a wide range of knowledge and skills.

Short-answer items were used in mathematics to assess students' skills and their abilities to work with brief, well-structured problems that had one or a very limited number of solutions. Short-answer items require approximately two to five minutes for most students to answer. The advantage of this item type is that it requires students to demonstrate knowledge and skills by generating, rather than merely selecting, an answer. The use of this item type was discontinued in English language arts, health education, science and technology, social studies, and visual and performing arts for the 2002-03 MEA.

Constructed-response items typically require students to use higher-order thinking skills—evaluation, analysis, summarization, and so on—in constructing a satisfactory response.

Constructed-response items should take most students approximately five to ten minutes to complete. It should be noted that previously released MEA items are available to all schools for classroom use. Schools are encouraged to incorporate the use of released items in their instructional activities so that students will be familiar with them.

COMMON-MATRIX DESIGN

The 2002-03 MEA continued to measure what students know and are able to do by using a variety of test item types. The tests continued to be structured using both *common* and *matrix-sampled* items. Common items are those taken by all students at a given grade level; in addition, a larger pool of matrix-sampled items is divided among the multiple forms of the test at each grade level. Each student took only one form of the test and so answered a fraction of the matrix-sampled items in the entire pool. This design, which has been used throughout the MEA's history, provides reliable and valid results at the student level. It also provides greater breadth of coverage of a content area for school results while minimizing testing time.

In 2002–03, MEA results continued to report out only common scores in the student level results for ease of understanding them. If student results were based on common and matrix-sampled items, one student could score higher than another in raw score, but lower in scaled score. By producing common results only, this type of reversal was avoided.

EMBEDDED FIELD TEST

Beginning with the 2001-02 school year, the MEA was redesigned to include an embedded field test in all content areas that was transparent to test takers and that had a negligible impact on testing time. Because the field test was taken by all students, it provided the sample needed to produce reliable data with which to inform item selection for future tests.

Embedding the field test achieved two other objectives. First, it created a pool of replacement items needed due to natural attrition caused by the release of all common items each year in English language arts, science and technology, social studies, and mathematics. Second, the embedded field test ensured that there would be sufficient numbers of items to fill the gaps in coverage of the

standards and performance indicators that result when common items are released and matrix items move to common. While the health education and visual and performing arts assessments are matrix-sampled only, three multiple-choice and two constructed-response health items and two constructed-response visual and performing arts items were also released from the 2002-03 MEA.

TEST BOOKLET DESIGN

In order to accommodate the embedded field test for the fall English language arts, writing, and health assessments, there were 16 unique test forms at each grade. Forms 1 through 10 contained the common and matrix portions of the test, and forms 11 through 16 were sub-forms that contained the common and embedded field test items in place of the matrix items. This design allowed administration of the field test without lengthening testing time and was necessary due to the unique structure of the English language arts test that is dependent upon reading passages. While it is true that not every student took the field test, the sample size was approximately 500 students and thus yielded sufficient data with which to make item selections.

The spring administration for the science and technology, social studies, mathematics, and visual and performing arts assessments comprised 12 unique forms. In this administration, every student took the embedded field test. However, only the responses of the students in the same schools that took the fall embedded field test were scored.

TEST SESSION TIMES

The MEA tests were given at two different times during the school year: **writing, reading, and health education** were administered to all grades in late fall, and tests in **mathematics, science and technology, social studies, and visual and performing arts** were administered to all grades during a two-week period in early March. Schools were able to schedule testing sessions at any time during the first week of this period, provided they followed the sequence in the scheduling guidelines detailed in test administration manuals and that all testing classes within a school were on the same schedule. The second week was reserved for make-up testing of students who were absent from initial test sessions.

The timing and scheduling guidelines for MEA tests were based on estimates of the time it would take an average student to respond to each type of item that makes up the test:

- multiple-choice– 1 minute
- short-answer– 2 minutes
- constructed-response– 10 minutes

For the English language arts reading test, the scheduling guidelines included an estimate of 10 minutes to read each passage used in the assessment.

While the guidelines for scheduling are based on the assumption that most students will complete the test within the time estimated, each test session was scheduled so that additional time was provided for students who needed it. One-third additional time was allocated for each session (i.e., 45-minute sessions with an additional 15 minutes and 35-minute sessions with an additional 10 minutes).

If classroom space was not available for students who required additional time to complete the tests, schools were allowed to consider using another space, such as the guidance office, for this purpose. If additional areas were not available, it was recommended that each classroom being used for test administration be scheduled for the maximum amount of time. Detailed instructions on test administration and scheduling were provided in the coordinator's and administrator's manuals.

CHAPTER 3—TEST DEVELOPMENT PROCESS

DEVELOPMENT COMMITTEE ITEM IDEA GENERATION

The development of the MEA tests continues to be a cooperative effort by content development committees comprising Maine teachers, curriculum supervisors, higher education faculty, content specialists of the Department of Education, and curriculum and assessment specialists employed by the assessment contractor, Measured Progress. The committees are structured to represent all areas of the state and committee members all serve rotating terms.

The committees' primary roles are to develop test items for the MEA and to interpret testing data so that those items can be selected for the program. The 2002-03 MEA development committee for each subject area at grade levels 4, 8, and 11 met two times. In the first meeting, after reviewing the content standards and test specifications, committee members approved which items from the 2001-02 MEA would move to common. Then they brainstormed or drafted test items and scoring rubrics for the embedded field test items that would fill the gaps in coverage of the standards left after items moved to common. In the second meeting, the committees reviewed item statistics and made recommendations about selecting, revising, or eliminating specific items from the item pool for the operational test. At that time, the committees also confirmed that each item aligned directly to Maine's *Learning Results* and was assigned to the appropriate content standard reported in school and district results. Because all common MEA items are released to the public each year, the committees repeat these activities annually as new items are developed in order to replenish the item pool.

INTERNAL ITEM REVIEW

- The lead Measured Progress test developer within the content specialty reviewed the typed item, constructed-response scoring guide, and any reading selections and graphics.
- The content reviewer considered item "integrity," item content and structure, appropriateness to designated content area, item format, clarity, possible ambiguity, keyability, single "keyness," appropriateness and quality of reading selections and graphics, and

appropriateness of scoring guide descriptions and distinctions (as correlated to the item and within the guide itself).

- The content reviewer also considered scorability and evaluated whether the scoring guide adequately addressed performance on the item.
- Fundamental questions the content reviewer considered, but was not limited to, included the following:
  - What is the item asking?
  - Is the key the only possible key? (Is there only *one* correct answer?)
  - Is the constructed-response item scorable as written (were the correct words used to elicit the response defined by the guide)?
  - Is the wording of the scoring guide appropriate and parallel to the item wording?
  - Is the item complete (e.g., with scoring guide, content codes, key, grade level, and contract identified)?
  - Is the item appropriate for the designated grade level?

EXTERNAL ITEM REVIEW

- Item sets were brought to Content Development Committee meetings for review and revision.

ITEM EDITING

Editors reviewed and edited the items from the Content Development Committee item review to ensure uniform style (based on *The Chicago Manual of Style, 14th Edition*) and adherence to sound testing principles. These principles included the stipulation that items

- were correct with regard to grammar, punctuation, usage, and spelling;
- were written in a clear, concise style;
- contained unambiguous explanations to students as to what is required to attain a maximum score;

- were written at a reading level that would allow the student to demonstrate his or her knowledge of the tested subject matter, regardless of reading ability;
- exhibited high technical quality regarding psychometric characteristics;
- had appropriate answer options or score-point descriptors; and
- were free of potentially sensitive content.

REVIEWING AND REFINING

Test developers presented item statistics to the development committees to assist in the committees' recommendations for placement of items into the common and matrix portions of the test. The Department of Education made the final selections with the assistance of Measured Progress at a meeting.

OPERATIONAL TEST ASSEMBLY

Test assembly is the sorting and laying out of item sets into test forms. Criteria considered during this process included the following:

- **Content coverage/match to test design.** The curriculum specialist completed an initial sorting of items into sets based on a balance of content categories across sessions and forms, as well as a match to the test design (e.g., number of multiple-choice, short-answer, and constructed-response items).
- **Item difficulty and complexity.** Item statistics drawn from the data analysis of previously tested items were used to ensure that there were similar levels of difficulty and complexity across forms.
- **Visual balance.** Item sets were reviewed to ensure that each reflected a similar length and "density" of selected items (e.g., length/complexity of reading selections, or number of graphics).
- **Option balance.** Each item set was checked to verify that it contained a roughly equivalent number of key options (As, Bs, Cs, and Ds).
- **Name balance.** Item sets were reviewed to ensure that a diversity of names was used.

- **Bias.** Each item set was reviewed to ensure fairness and balance based on gender, ethnicity, religion, socio-economic status, and other factors.
- **Page fit.** Item placement was modified to ensure the best fit and arrangement of items on any given page.
- **Facing page issues.** For multiple items associated with a single stimulus (a graphic or reading selection), consideration was given to whether those items needed to begin on a left- or right-hand page, as well as to the nature and amount of material that needed to be placed on facing pages. These considerations served to minimize the amount of "page flipping" required of students.
- **Relationships between forms.** Sets of common items were placed identically in each version of the forms. Although matrix-sampled item sets differ from form to form, they must take up the same number of pages in each form so that sessions and content areas begin on the same page in every form. Therefore, the number of pages needed for the longest form often determines the layout of each form.
- **Visual appeal.** The visual accessibility of each page of the form was always taken into consideration, including such aspects as the amount of "white space," the density of the text, and the number of graphics.

EDITING DRAFTS OF OPERATIONAL TESTS

Any changes made by the test construction specialist must be reviewed and approved by the test developer. Once a form had been laid out in what was considered its final form, it was reread to identify any final considerations, including the following:

- Editorial changes. All text was scrutinized for editorial accuracy, including consistency of instructional language, grammar, spelling, punctuation, and layout. Measured Progress' publishing standards are based on *The Chicago Manual of Style, 14th Edition*.
- "Keying" items. Items were reviewed for any information that might "key" or provide information that would help answer another item. Decisions about moving keying items are

based on the severity of the "key-in" and the placement of the items in relation to each other within the form.

- Key patterns. The final sequence of keys was reviewed to ensure that their order appeared random (e.g., no recognizable pattern, and no more than three of the same key in a row).

BRAILLE AND LARGE-PRINT TRANSLATION

Form 1 for the grades 4, 8, and 11 tests was translated into Braille by a subcontractor that specializes in test materials for blind and visually impaired students. In addition, Form 1 for each grade was adapted into a large-print version.

SHELTERED ENGLISH TRANSLATION

The Department of Education, in recognition of the growing numbers of Maine students with limited English language proficiency, introduced a sheltered English translation of the mathematics portions of the MEA for the March 2003 administration. Only grade 4, 8, and 11 students who were classified as Limited English Proficient (LEP) were eligible to take this version of the test, which was a translation of Form 1 of the general test.

Measured Progress contracted with Second Language Testing, Inc. of Bethesda, Maryland, a nationally known translation company, to translate the mathematics test. A cadre of linguistic and mathematics content specialists performed the translations, which then were reviewed by content specialists at the Department of Education and Measured Progress. This review assured that the translation did not unintentionally compromise the content integrity of the items. Any differences of opinion that arose from the impact of the translation were resolved jointly by the Department and Second Language Testing, Inc.

CHAPTER 4—DESIGN OF ENGLISH LANGUAGE ARTS ASSESSMENT

READING

BLUEPRINT

As indicated earlier, the English language arts framework for reading is based on Maine's *Learning Results*, which identifies five **content standards** that apply specifically to reading and reading comprehension. Those content standards are:

- **Process of reading:** Students use the skills and strategies of the reading process to comprehend, interpret, evaluate, and appreciate what they have read.
- **Literature and culture:** Students use reading, listening, and viewing strategies to experience, understand, and appreciate literature and culture.
- **Language and images:** Students demonstrate an understanding of how words and images communicate.
- **Informational texts:** Students apply reading, listening, and viewing strategies to informational texts across all areas of curriculum.

The content standards have been adapted to create a reporting category framework for reading, as shown below.

Passage Type	Comprehension of Literary and Informational Texts			Total
	Reading Comprehension and Literary Analysis	A. Process of Reading	C. Language and Images	
B. Literature and Culture: Literary Passages				50%
D. Informational Texts: Content Passages Practical Passages				50% (30%) (20%)
Total	70%	30%		100%

CONTENT SPECIFICATIONS

The first major reporting category at the student, school, and district levels is "comprehension of literary and informational texts." The data generated for this reporting category were based on items related to three types of reading passages that reflect standards B and D of the English Language Arts (ELA) *Learning Results*. The passage types were identical to those that have been used in the MEA in past years. Fifty percent of the passages comprised literary works; 30% were selected from content pieces (see explanation below); and 20% were drawn from practical sources (see explanation below).

Passages included both long and short "authentic" texts selected from reading sources that students at each grade level would be likely to encounter in their classroom and in their independent reading. The passages were not written specifically for the assessment, but instead were collected from published works.

- **Literary passages** are represented by a variety of genres—modern narratives; diary entries; drama; poetry; biographies; essays; excerpts from novels; short stories; and traditional narratives, such as fables, myths, and folktales.
- **Content passages** are primarily informational and often deal with the areas of science and social studies. They are drawn from such sources as newspapers, magazines, and books.
- **Practical passages** are functional materials that instruct or advise the reader—for example, directions, reference tools, or manuals.

The main difference in the passages used for grades 4, 8, and 11 is the degree of difficulty. All passages were selected to be appropriate for the intended audience; however, the ideas expressed become increasingly more complex at grade levels 8 and 11.

The items related to these passages require students to demonstrate their skills in both literal comprehension (where the answer is stated explicitly in the text) and inferential comprehension (where the answer is implied by the text and/or the text must be connected to relevant prior knowledge to determine an answer). In addition, some items focus on the reading skills reflected in content standards A and C of the *Learning Results*. Items of this type require students to use the skills

and strategies of reading to answer items—for example, how to identify the author's principal purpose, such as to persuade, entertain, or inform—and to demonstrate their understanding of how words and images communicate to readers.

ITEM TYPES

The MEA English language arts assessment in reading included multiple-choice and constructed-response items, as well as one extended-response/writing sample item. Each type of item was worth a specific number of points in the student's total language arts score, as shown below.

Type of Item	Possible Score Points
Multiple Choice	0–1
Constructed Response	0–4
Extended Response/Writing Sample	0–4

TEST DESIGN

The table below summarizes the numbers and types of items that were used in the MEA reading assessment for 2002-03.

Session	COMMOM			MATRIX			Time (minutes)
	MC	CR	ER	MC	CR	ER	
2A	8	2	0				30 (+10)
2B	8	2	0				30 (+10)
3A	8	1	1				45 (+15)
3B				8	2	0	30 (+10)

Key

- MC = multiple-choice
- CR = constructed-response
- ER = extended-response/writing sample

The charts on the following pages outline the total number of possible points—as reported—by learning results and item type.

ENGLISH LANGUAGE ARTS — READING
GRADE 4

	Standard A			Standard B			Standard C			Standard D			Total
Common Passages	**MC** x 1	**CR** x 4	**Pts**	**MC** x 1	**CR** x 4	**Pts**	**MC** x 1	**CR** x 4	**Pts**	**MC** x 1	**CR** x 4	**Pts**	**Points 208**
Should Your School Tell You What To Wear?	3	1	7			0			0	5	1	9	16
Be a Junk Food Detective	3		3			0			0	1	1	5	8
Climbing/Every Time I Climb a Tree			0	2	1	6	2		2			0	8
Avalanche!	3		3	5	2	13			0			0	16
Matrix Passages													
The Sweepstakes Winner	1		1	6	2	14	1		1			0	16
Alcove Spring	1		1	4	2	12	3		3			0	16
April Rain Song/Thunder Storm			0	1		1	3	1	7			0	8
Brown Air and Acid Rain/Acid Rain Experiment			0			0	2		2	2	1	6	8
Lamingtons			0			0	3		3	5	2	13	16
Welcome To The Inventors Club!!!	1		1			0	1		1	6	2	14	16
Amazing Spiders			0			0			0	4	1	8	8
The Gnat and the Bull/King Lion and the Beetle			0	3	1	7	1		1			0	8
Let's Write a True Life Story			0			0	1		1	3	1	7	8
Ruby			0	3		3	1	1	5			0	8
Greedy Green Guzzlers			0			0	1		1	3	1	7	8
Marsha			0	3	1	7	1		1			0	8
My Dino Discovery	2		2			0			0	2	1	6	8
Secret Place			0	3	1	7	1		1			0	8
Bacon-Tomato Sandwiches	1		1			0			0	3	1	7	8
Brian's Winter	1		1	3	1	7			0			0	8

ENGLISH LANGUAGE ARTS — READING
GRADE 8

	Standard A			Standard B			Standard C			Standard D			Total
Common Passages	**MC** x 1	**CR** x 4	**Pts**	**MC** x 1	**CR** x 4	**Pts**	**MC** x 1	**CR** x 4	**Pts**	**MC** x 1	**CR** x 4	**Pts**	**Points 208**
Amir	2		2	6	2	14			0			0	16
Why I Never Shoot Bears			0	3	1	7	1		1			0	8
You Can Be an Inventor	3	1	7			0	1		1			0	8
Hurricanes			0			0	2		2	6	2	14	16
Matrix Passages													
Lost in the Woods	2		2			0			0	6	2	14	16
The Last Days of Lincoln	1		1	6	2	14	1		1			0	16
Right Smart O' Wind	1	1	5	2	1	6	5		5			0	16
The Heroes of Pea Island	1	1	5			0	1		1	6	1	10	16
The Life of the Ladybird Beetle	3	1	7			0	1		1	4	1	8	16
Springsteen Concert Debated			0			0	2		2	6	2	14	16
Diary of Anne Frank/Zlata's Diary			0	2	1	6	2		2			0	8
Road Runner Sports	2		2			0			0	2	1	6	8
Cool Science – A Lesson Runs Through It		1	4			0	1		1	3		3	8
Wreck of the Monkey Cage			0	3	1	7	1		1			0	8
Gus			0	4	1	8			0			0	8
The Many Faces of America: Immigration	1		1			0			0	3	1	7	8
First Lesson/Fathers			0	4	1	8			0			0	8
Gentle Friends, Essential Allies	1		1			0	1		1	2	1	6	8

ENGLISH LANGUAGE ARTS — READING
GRADE 11

	Standard A			Standard B			Standard C			Standard D			Total
Common Passages	**MC** x 1	**CR** x 4	**Pts**	**MC** x 1	**CR** x 4	**Pts**	**MC** x 1	**CR** x 4	**Pts**	**MC** x 1	**CR** x 4	**Pts**	**Points 208**
Why You Like Some Food and Hate Others	3		3			0			0	5	2	13	16
Discover Whitewater Rafting			0			0	1		1	3	1	7	8
I Wandered Lonely as a Cloud			0	3	1	7	1		1			0	8
The Ojibwa Corn Hero	1	1	5	7	1	11			0			0	16
Matrix Passages													
The Country of the Pointed Firs – William	2		2	5	2	13	1		1			0	16
A Day's Wait			0	7	2	15	1		1			0	16
JobsInME.com	2		2			0			0	6	2	14	16
A Day at the Theater	1		1			0	2		2	5	2	13	16
Snails and Slugs	2		2			0	1		1	5	2	13	16
Prevent Repetitive Strain at the Keyboard	2		2			0			0	2	1	6	8
Where Children Live		1	4	4		4			0			0	8
At Harvesttime			0	3	1	7	1		1			0	8
Boston Red Sox Fenway Park	1		1			0	1		1	2	1	6	8
Children of the Sun	1		1	3	1	7			0			0	8
Feet	1		1			0	1		1	2	1	6	8
Nearer	1		1	3	1	7			0			0	8
Piltdown Man	1		1			0			0	3	1	7	8
Life in the Thirteen Colonies	1		1			0			0	3	1	7	8
Polonius's Advice to Laertes	1		1	3	1	7			0			0	8

WRITING

BLUEPRINT

The MEA assesses students' writing skills directly through the use of writing prompts, or topics, to which students respond. Maine's *Learning Results* includes two content standards that apply specifically to writing. Those content standards are

- **Standard English conventions:** Students write and speak correctly, using conventions of standard written and spoken English.
- **Stylistic and rhetorical aspects of writing and speaking:** Students use stylistic and rhetorical aspects of writing and speaking to explore ideas, to present lines of thought, to represent and reflect on human experience, and to communicate feelings, knowledge, and opinions.

The *Learning Results* standards were adapted to create reporting categories for writing, as shown below.

Stylistic and Rhetorical Aspects of Writing	▪ Idea/topic development ▪ Organization ▪ Supporting detail
Standard English Conventions	▪ Grammar ▪ Spelling ▪ Punctuation ▪ Capitalization ▪ Sentence structure

CONTENT SPECIFICATIONS

Four broad types, or modes, of writing are used in the MEA, as listed below[1]:

- **Narration:** Narrative writing answers the question, "What happened?" It tells a story through a sequence of events, so that the reader understands the action.
- **Exposition:** Expository writing informs the reader about something. Methods of exposition include comparison and contrast, illustration, classification, definition, and analysis. Methods of exposition are often combined to accomplish a specific purpose for writing.

[1] Descriptions are adapted from *Modern Rhetoric*, by Cleanth Brooks and Robert Penn Warren.

- **Description:** Descriptive writing presents the qualities of objects, persons, conditions, and actions.
- **Persuasion/argument:** Persuasive writing uses emotional appeals to bring about a change of attitude, point of view, or feeling. Argumentative writing uses logic and reason to bring about a change of attitude, point of view, or feeling; it shows that a conclusion merits belief because of credible data, evidence, and so on.

The student's "audience" and "purpose for writing" also influence the development, style, and tone of a written composition. These were specified as part of the prompts and varied by grade level. In addition, the prompts were developed with the following criteria as guidelines:

- the prompts must be interesting to students;
- the prompts must be accessible to all students (i.e., all students would have something to say about the topic); and
- the prompts must generate sufficient text to be effectively scored.

The prompts used in the 2002-03 MEA writing assessment follow.

Grade 4 prompt: You find a strange invention. Describe what it looks like and what it does.

Grade 8 prompt: Write about an important lesson that children should learn.

Grade 11 prompt: What if there were eight days in a week? Write about how you would use the additional day.

TEST DESIGN

Each student responded to one common writing prompt, as well as a common extended-response/writing sample question that was scored for both reading and writing. The chart that follows outlines the total number of possible points—as reported—by learning results and item type.

ENGLISH LANGUAGE ARTS—WRITING

Number of Points Possible
Grade 4

Standard	Common Prompt	Extended Response Writing	Total Points
Standard English Conventions (Standard F)	8	4	12
Stylistic and Rhetorical Aspects of Writing (Standard G)	12	6	18

Number of Points Possible
Grade 8

Standard	Common Prompt	Extended Response Writing	Total Points
Standard English Conventions (Standard F)	8	4	12
Stylistic and Rhetorical Aspects of Writing (Standard G)	12	6	18

Number of Points Possible
Grade 11

Standard	Common Prompt	Extended Response Writing	Total Points
Standard English Conventions (Standard F)	8	4	12
Stylistic and Rhetorical Aspects of Writing (Standard G)	12	6	18

CHAPTER 5—DESIGN OF THE MATHEMATICS ASSESSMENT

BLUEPRINT

The mathematics framework was based on Maine's *Learning Results*, which identifies eleven **content standards** as shown below:

- **Numbers and number sense:** Students understand and demonstrate a sense of what numbers mean and how they are used.
- **Computation:** Students understand and demonstrate computation skills.
- **Data analysis and statistics:** Students understand and apply concepts of data analysis.
- **Probability:** Students understand and apply concepts of probability.
- **Geometry:** Students understand and apply concepts from geometry.
- **Measurement:** Students understand and demonstrate measurement skills.
- **Patterns, relations, and functions:** Students understand that mathematics is the science of patterns, relationships, and functions.
- **Algebra concepts:** Students understand and apply algebraic concepts.
- **Discrete mathematics:** Students understand and apply concepts in discrete mathematics.
- **Mathematical reasoning:** Students understand and apply concepts of mathematical reasoning.
- **Mathematical communication:** Students reflect upon and clarify their understanding of mathematical ideas and relationships.

These standards were used to create a reporting category framework for mathematics, shown below. The framework was divided into two major areas:

- **content**, which refers to the student's knowledge and conceptual and procedural understanding of each standard, and

- **application**, which refers to a student's use of knowledge and conceptual and procedural understanding as a basis for application through reasoning, inquiry, communication of ideas, and problem solving.

Each item in the mathematics assessment measured a content standard; in addition, each item was reported as measuring either content or application.

As shown in the table below, the goal for distribution of items, or emphasis, across standards varies from grade to grade.

Content Standard	Grade		
	4	8	11
A. Number and Number Sense	15%	14%	10%
B. Computation	15%	11%	5%
C. Data Analysis and Statistics	12%	11%	10%
D. Probability	8%	11%	10%
E. Geometry	12%	11%	15%
F. Measurement	12%	10%	10%
G. Patterns, Relations, Functions	12%	13%	15%
H. Algebra Concepts	9%	14%	15%
I. Discrete Mathematics	5%	5%	10%

CONTENT AND APPLICATION

For students to function effectively as mathematical problem-solvers, they must be taught how to apply and communicate basic concepts and procedures as well as how to do the procedures. **Content items** measure what students have been taught directly, including the basic concepts and procedural skills from all the content standards. For example, in the numbers and number sense standard and the computation standard, conceptual and procedural knowledge includes understanding of place value in our number system; the computational algorithms as applied to whole numbers, fractions, and decimals; and the concepts of ratio, proportion, and percent. In the data analysis and statistics standard, conceptual and procedural knowledge includes the reading of charts and graphs as well as the concepts of averages (means, medians, and modes) and methods for computing them.

Contextual settings used in items measuring this category are very simple and are directly related to those used in the teaching of the concepts and procedures.

Application items measure what the students can do with what they have been taught. Included are items requiring students to combine the basic concepts and procedures to solve real-life and mathematical problems, to evaluate their own ideas and the ideas of others using mathematical reasoning, and to communicate their ideas using the wealth of symbolic, pictorial, graphic, and verbal representations available in mathematics.

It is important to understand that application items also measure mastery of the basic concepts and procedures. For example, in mathematics, 52 percent of the items are either short-answer or constructed-response items (see "Content Specifications" below), which are worth up to 2 and 4 score points respectively. In most cases, portions of these items require the student to perform some problem solving, reasoning, and/or communicating, and so the items are classified under applications. At the same time, however, the items require students to demonstrate their understanding of mathematics content. If a student does not show mastery of all aspects of a short-answer or constructed-response item, or if he/she makes careless errors, the student does not earn the highest score for that item. Thus, it can be said that **all** mathematics items in the MEA measure content; some items go beyond that realm, however, and are classified for reporting purposes as application.

CONTENT SPECIFICATIONS

The MEA mathematics assessment included multiple-choice, short-answer, and constructed-response items. Each item type was worth a specific number of points in the student's total mathematics score, as shown below.

Type of Item	Possible Score Points
Multiple Choice	0–1
Short Answer	0–2
Constructed Response	0–4

TEST DESIGN

The tables below summarize the numbers and types of items that were used in the MEA mathematics assessment for 2002-03. The tables show the construction of the common, matrix-sampled, and embedded field test portions of the assessment.

GRADE 4

Session	COMMON			MATRIX			FIELD TEST			Time (minutes)
	MC	SA	CR	MC	SA	CR	MC	SA	CR	
4A (NC)	6	5	2	2	1	1*	1	1	1*	35 (+10)
4B (C)	7	0	3	0	0	0	0	0	0	35 (+10)
4C (C)	9	0	1	4	0	1*	2	0	1*	35 (+10)

*alternating matrix and field test item

GRADES 8 AND 11

Session	COMMON			MATRIX			FIELD TEST			Time (minutes)
	MC	SA	CR	MC	SA	CR	MC	SA	CR	
4A (NC)	5	5	2	2	1	1*	1	1	1*	55 (+15)
4B (C)	17	0	2	4	0	1*	2	0	1*	55 (+15)

*alternating matrix and field test item

Key

- (NC) = no calculator use allowed
- (C) = calculator use allowed
- MC = multiple-choice
- SA = short-answer
- CR = constructed-response

THE USE OF CALCULATORS IN THE MEA

The Maine educators who designed and developed the assessment test acknowledge the importance of mastering arithmetic algorithms. At the same time, they understand that the use of calculators is a necessary and important skill in society today. Calculators can save time and error in the measurement of some higher order thinking skills and allow students to do more sophisticated and intricate problems. For these reasons, it was decided that calculators should be permitted in some parts of the MEA mathematics assessment and prohibited in others. (Students were allowed to use any calculator with which they are familiar.)

The charts on the following pages outline the total number of possible points—as reported—by learning results and item type.

MATHEMATICS
NUMBER OF POINTS POSSIBLE
GRADE 4

Standard	Common				Matrix Per Form				Total Points 192
	MC x 1	SA x 2	CR x 4	Points	MC x 1	SA x 2	CR x 4	Points	
Content	20	2		24	60	7		74	98
Application	2	3	4	24	12	5	12	70	94
Numbers and Number Sense (Standard A)	1	1	1	7	16	1	1	22	29
Computation (Standard B)	3	2		7	10	3	2	24	31
Data Analysis and Statistics (Standard C)	5			5	7	1	2	17	22
Probability (Standard D)	3			3	6	1	1	12	15
Geometry (Standard E)	6			6	7	1	2	17	23
Measurement (Standard F)		1	1	6	11	3		17	23
Patterns, Relations, Functions (Standard G)	1	1	1	7	9		2	17	24
Algebra Concepts (Standard H)	1		1	5	5	1	1	11	16
Discrete Mathematics (Standard I)	2			2	1	1	1	7	9

MATHEMATICS
NUMBER OF POINTS POSSIBLE
GRADE 8

Standard	Common				Matrix Per Form				Total Points 192
	MC x 1	SA x 2	CR x 4	Points	MC x 1	SA x 2	CR x 4	Points	
Content	13	2		17	36	3	2	50	67
Application	9	3	4	31	36	9	10	94	125
Numbers and Number Sense (Standard A)	7			7	17	2		21	28
Computation (Standard B)	1		1	5	5	2	2	17	22
Data Analysis and Statistics (Standard C)		1	1	6	10	1	1	16	22
Probability (Standard D)	3	1		5	5		2	13	18
Geometry (Standard E)	3	1		5	7	1	1	13	18
Measurement (Standard F)	1		1	5	5	2	2	17	22
Patterns, Relations, Functions (Standard G)	1	1	1	7	10	3	1	20	27
Algebra Concepts (Standard H)	4	1		6	7	1	3	21	27
Discrete Mathematics (Standard I)	2			2	6			6	8

MATHEMATICS
NUMBER OF POINTS POSSIBLE
GRADE 11

Standard	Common				Matrix Per Form				Total Points 192
	MC x 1	SA x 2	CR x 4	Points	MC x 1	SA x 2	CR x 4	Points	
Content	8	1		10	36	2	2	48	58
Application	14	4	4	38	36	10	10	96	134
Numbers and Number Sense (Standard A)	3	1		5	6		1	10	15
Computation (Standard B)	3			3	9		1	13	16
Data Analysis and Statistics (Standard C)	1		1	5	9	2	1	17	22
Probability (Standard D)	1		1	5	8	1	1	14	19
Geometry (Standard E)	5	1		7	11	2	2	23	30
Measurement (Standard F)	4			4	5	2	1	13	17
Patterns, Relations, Functions (Standard G)	2	1	1	8	10	2	1	18	26
Algebra Concepts (Standard H)		2	1	8	11	2	3	27	35
Discrete Mathematics (Standard I)	3			3	3	1	1	9	12

CHAPTER 6—DESIGN OF THE SCIENCE AND TECHNOLOGY ASSESSMENT

BLUEPRINT

The science and technology framework was based on Maine's *Learning Results*, which identify thirteen **content standards** as listed below:

- **Classifying life forms:** Students understand that there are similarities within the diversity of all living things.
- **Ecology:** Students understand how living things depend on one another and on non-living aspects of the environment.
- **Cells:** Students understand that cells are the basic units of life.
- **Continuity and change:** Students understand the basis for all life and that all living things change over time.
- **Structure of matter:** Students understand the structure of matter and the changes it can undergo.
- **The Earth:** Students gain knowledge about the Earth and the processes that change it.
- **The universe:** Students gain knowledge about the universe and how humans have learned about it, and the principles upon which it operates.
- **Energy:** Students understand concepts of energy.
- **Motion:** Students understand the motion of objects and how forces can change that motion.
- **Inquiry and problem solving:** Students apply inquiry and problem-solving approaches in science and technology.
- **Scientific reasoning:** Students learn to formulate and justify ideas and to make informed decisions.
- **Communication:** Students communicate effectively in the applications of science and technology.

- **Implications of science and technology:** Students understand the historical, social, economic, environmental, and ethical implications of science and technology.

Nine of these standards (A through I) address the various content areas in science and technology as shown below.

Content Standard	Grade		
	4	8	11
A. Classifying Life Forms	8%	2%	8%
B. Ecology	0%	0%	4%
C. Cells	6%	6%	2%
D. Continuity and Change	8%	10%	4%
E. Structure of Matter	6%	8%	13%
F. The Earth	0%	6%	4%
G. The Universe	10%	10%	6%
H. Energy	13%	10%	6%
I. Motion	8%	6%	10%

The remaining four (J, K, L, and M) highlight scientific applications. These have been adapted and combined to create the reporting category framework for science and technology, shown below.

Content Standard	Application			
	J. Inquiry and Problem Solving	K. Scientific Reasoning	L. Communication	M. Implications of Science & Technology
A. Classifying Life Forms				
B. Ecology				
C. Cells				
D. Continuity and Change				
E. Structure of Matter				
F. The Earth				
G. The Universe				
H. Energy				
I. Motion				

All items in the science and technology assessment measured a content standard; approximately 40% of the items were written to measure a performance indicator in applications.

APPLICATIONS

The score for applications refers to a student's use of knowledge and conceptual and procedural understandings as a basis for application through reasoning, inquiry, communication of ideas, and problem solving.

CONTENT SPECIFICATIONS

The MEA science and technology assessment included multiple-choice and constructed-response items. Each item type was worth a specific number of points in the student's total science and technology score, as shown below.

Type of Item	Possible Score Points
Multiple Choice	0–1
Constructed Response	0–4

TEST DESIGN

The tables below summarize the numbers and types of items that were used in the MEA science and technology assessment for 2002-03.

GRADE 4

Session	COMMON		MATRIX		FIELD TEST		Time (minutes)
	MC	CR	MC	CR	MC	CR	
2A	15	2	0	0	0	0	35 (+10)
2B	9	3	0	0	0	0	35 (+10)
2C	0	1	8	1	3	1	35 (+10)

GRADES 8 AND 11

Session	COMMON		MATRIX		FIELD TEST		Time (minutes)
	MC	CR	MC	CR	MC	CR	
2A	20	4	0	0	0	0	55 (+15)
2B	4	2	8	1	3	1	55 (+15)

Key

- MC = multiple-choice
- CR = constructed-response

The charts on the following pages outline the total number of possible points—as reported—by learning results and item type.

SCIENCE AND TECHNOLOGY
NUMBER OF POINTS POSSIBLE
GRADE 4

Standard	Common			Matrix			Total Points 192
	MC X 1	CR X 4	Points	MC X 1	CR X 4	Points	
Content	13	4	29	65	6	89	118
Classifying Life Forms (Standard A)		1	4	4	1	8	12
Ecology (Standard B)			0	13	1	17	17
Cells (Standard C)	3		3	6	1	10	13
Continuity and Change (Standard D)	4		4	7		7	11
Structure of Matter (Standard E)	3		3	3	1	7	10
The Earth (Standard F)			0	8		8	8
The Universe (Standard G)	1	1	5	7	1	11	16
Energy (Standard H)	2	1	6	9	1	13	19
Motion (Standard I)		1	4	8		8	12
Application	11	2	19	31	6	55	74
Inquiry and Problem Solving (Standard J)	5		5	5	2	13	18
Scientific Reasoning (Standard K)	5		5	7	2	15	20
Communication (Standard L)	1	1	5	11	1	15	20
Implications of Science and Technology (Standard M)		1	4	8	1	12	16

SCIENCE AND TECHNOLOGY
NUMBER OF POINTS POSSIBLE
GRADE 8

Standard	Common			Matrix			Total Points
	MC X 1	CR X 4	Points	MC X 1	CR X 4	Points	192
Content	17	3	29	61	5	81	110
Classifying Life Forms (Standard A)	1		1	6		6	7
Ecology (Standard B)			0	2	1	6	6
Cells (Standard C)	3		3	11		11	14
Continuity and Change (Standard D)	5		5	7	1	11	16
Structure of Matter (Standard E)		1	4	8	1	12	16
The Earth (Standard F)	3		3	8	1	12	15
The Universe (Standard G)	1	1	5	7		7	12
Energy (Standard H)	1	1	5	8		8	13
Motion (Standard I)	3		3	4	1	8	11
Application	7	3	19	35	7	63	82
Inquiry and Problem Solving (Standard J)	1	1	5	13	2	21	26
Scientific Reasoning (Standard K)	3		3	9	1	13	16
Communication (Standard L)	3		3	7	2	15	18
Implications of Science and Technology (Standard M)		2	8	6	2	14	22

SCIENCE AND TECHNOLOGY
NUMBER OF POINTS POSSIBLE
GRADE 11

Standard	Common			Matrix			Total Points 192
	MC X 1	CR X 4	Points	MC X 1	CR X 4	Points	
Content	16	3	28	66	8	98	126
Classifying Life Forms (Standard A)		1	4	7		7	11
Ecology (Standard B)	2		2	8		8	10
Cells (Standard C)	1		1	8	2	16	17
Continuity and Change (Standard D)	2		2	6		6	8
Structure of Matter (Standard E)	2	1	6	9	1	13	19
The Earth (Standard F)	2		2	9	2	17	19
The Universe (Standard G)	3		3	4	1	8	11
Energy (Standard H)	3		3	7	1	11	14
Motion (Standard I)	1	1	5	8	1	12	17
Application	8	3	20	30	4	46	66
Inquiry and Problem Solving (Standard J)		1	4	13		13	17
Scientific Reasoning (Standard K)	3		3	1		1	4
Communication (Standard L)	3	1	7	8	2	16	23
Implications of Science and Technology (Standard M)	2	1	6	8	2	16	22

CHAPTER 7—DESIGN OF THE SOCIAL STUDIES ASSESSMENT

BLUEPRINT

The social studies framework was based on Maine's *Learning Results*, which identifies a total of thirteen **content standards** in the four disciplines—civics and government, history, geography, and economics—as listed below:

CIVICS AND GOVERNMENT

- **Rights, responsibilities, and participation:** Students understand the rights and responsibilities of civic life and employ the skills of effective civic participation.
- **Purpose and types of government:** Students understand the types and purposes of governments, their evolution, and their relationships with the governed.
- **Fundamental principles of government and constitutions:** Students understand the constitutional principles and the democratic foundations of the political institutions of the United States.
- **International relations:** Students understand the political relationships among the United States and other nations.

HISTORY

- **Chronology:** Students use the chronology of history and major eras to demonstrate the relationships of events and people.
- **Historical knowledge, concepts, and patterns:** Students develop historical knowledge of major events, people, and enduring themes in the United States, in Maine, and throughout world history.
- **Historical inquiry, analysis, and interpretation:** Students learn to evaluate resource material such as documents, artifacts, maps, artwork, and literature, and to make judgments

about the perspectives of the authors and their credibility when interpreting current historical events.

GEOGRAPHY

- **Skills and tools:** Students know how to construct and interpret maps and use globes and other geographic tools to locate and derive information about people, places, regions, and environments.
- **Human interaction with environments:** Students understand and analyze the relationships among people and their physical environments.

ECONOMICS

- **Personal and consumer economics:** Students understand that economic decisions are based on the availability of resources and the costs and benefits of choices.
- **Economic systems of the United States:** Students understand the economic system of the United States, including its principles, development, and institutions.
- **Comparative systems:** Students analyze how different economic systems function and change over time.
- **International trade and global interdependence:** Students understand the patterns and results of international trade.

These thirteen standards have been used to create the reporting category framework for social studies, shown on the next page.

Social Studies Framework		
Standard	**Percentage of Questions Emphasizing Content**	**Percentage of Questions Emphasizing Application**
Civics and Government:		
A. Rights, Responsibilities, and Participation	50%	50%
B./C. Purposes, Types, and Fundamental Principles	60%	40%
D. International Relations	60%	40%
History:		
A./B. Chronology and Historical Knowledge, Concepts, and Patterns	60%	40%
C. Historical Inquiry, Analysis, and Interpretation	40%	60%
Geography:		
A. Skills and Tools	40%	60%
B. Human Interaction with Environments	60%	40%
Economics:		
A. Personal and Consumer Economics	50%	50%
B./C. Economic Systems	50%	50%
D. International Trade and Global Interdependence (Grades 8 and 11)	60%	40%

Social studies education stresses a strong commitment to content knowledge, emphasizes the student's ability to engage in complex thinking and reasoning skills, and emphasizes the clear communication of ideas. Social studies assessment focuses on both content and applications to evaluate what students know and can demonstrate.

CONTENT SPECIFICATIONS

The MEA social studies assessment included multiple-choice and constructed-response items. Each item type was worth a specific number of points in the student's total social studies score, as shown below.

Type of Item	Possible Score Points
Multiple Choice	0–1
Constructed Response	0–4

TEST DESIGN

The tables below summarize the numbers and item types that were used in the 2002-03 social studies assessment.

GRADE 4

Session	COMMON		MATRIX		FIELD TEST		Time (minutes)
	MC	CR	MC	CR	MC	CR	
3A	15	2	0	0	0	0	35 (+10)
3B	9	3	0	0	0	0	35 (+10)
3C	0	1	8	1	3	1	35 (+10)

GRADES 8/11

Session	COMMON		MATRIX		FIELD TEST		Time (minutes)
	MC	CR	MC	CR	MC	CR	
3A	20	4	0	0	0	0	55 (+15)
3B	4	2	8	1	3	1	55 (+15)

Key

- MC = multiple-choice
- CR = constructed-response

The charts on the following pages outline the total number of possible points—as reported—by learning results and item type.

SOCIAL STUDIES
NUMBER OF POINTS POSSIBLE
GRADE 4

Standard	Common			Matrix			Total Points 192
	MC X 1	CR X 4	Points	MC X 1	CR X 4	Points	
Content	18	4	34	95		95	129
Application	6	2	14	1	12	49	63
Civics and Government (Standards A, B, and C)	7	1	11	22	3	34	45
Rights, Responsibilities, and Participation (Standard A)	3		3	10		10	13
Purpose, Types, and Fundamental Principles of Government (Standards B and C)	4	1	8	12	3	24	32
History (Standards A, B, and C)	5	2	13	25	3	37	50
Chronology, Historical Knowledge, Concepts, and Patterns (Standards A and B)	5	1	9	21	1	25	34
Historical Inquiry, Analysis, and Interpretation (Standard C)		1	4	4	2	12	16
Geography (Standards A and B)	6	2	14	25	3	37	51
Skills and Tools (Standard A)	3	2	11	18		18	29
Human Interaction with Environments (Standard B)	3		3	7	3	19	22
Economics (Standards A, B, C, and D)	6	1	10	24	3	36	46
Personal and Consumer Economics/ Economic Systems (Standards A and B)	5	1	9	19	2	27	36
Comparative Systems/International Trade and Global Interdependence (Standards C and D)	1		1	5	1	9	10

SOCIAL STUDIES
NUMBER OF POINTS POSSIBLE
GRADE 8

Standard	Common			Matrix			Total Points 192
	MC X 1	CR X 4	Points	MC X 1	CR X 4	Points	
Content	22	1	26	79	1	83	109
Application	2	5	22	17	11	61	83
Civics and Government (Standards A, B, C and D)	7	1	11	17	4	33	44
Rights, Responsibilities, and Participation (Standard A)	2	1	6	6	1	10	16
Purpose, Types, and Fundamental Principles of Government (Standards B and C)	4		4	9	2	17	21
International Relations (Standard D)	1		1	2	1	6	7
History (Standards A, B, and C)	7	2	15	27	4	43	58
Chronology, Historical Knowledge, Concepts, and Patterns (Standards A and B)	5	1	9	21		21	30
Historical Inquiry, Analysis, and Interpretation (Standard C)	2	1	6	6	4	22	28
Geography (Standards A and B)	4	2	12	28	2	35	48
Skills and Tools (Standard A)	2		2	17	1	21	23
Human Interaction with Environments (Standard B)	2	2	10	11	1	15	25
Economics (Standards A, B, C, and D)	6	1	10	24	2	32	42
Personal and Consumer Economics (Standards A)	2		2	11	1	15	17
Economic Systems/Comparative Systems (Standards B and C)	3	1	7	10		10	17
International Trade and Global Interdependence (Standards D)	1		1	3	1	7	8

SOCIAL STUDIES
NUMBER OF POINTS POSSIBLE
GRADE 11

Standard	Common			Matrix			Total Points 192
	MC x 1	CR x 4	Points	MC x 1	CR x 4	Points	
Content	18		18	78		78	96
Application	6	6	30	18	12	66	96
Civics and Government (Standards A, B, C, and D)	4	2	12	25	3	37	49
Rights, Responsibilities, and Participation (Standard A)	1	1	5	6	1	10	15
Purpose, Types, and Fundamental Principles of Government (Standards B and C)	2	1	6	16	2	24	30
International Relations (Standard D)	1		1	3		3	4
History (Standards A, B, and C)	6	2	14	26	4	42	56
Chronology, Historical Knowledge, Concepts, and Patterns (Standards A and B)	4	2	12	24	3	36	48
Historical Inquiry, Analysis, and Interpretation (Standard C)	2		2	2	1	6	8
Geography (Standards A and B)	7	1	11	23	2	31	42
Skills and Tools (Standard A)	4		4	11	2	19	23
Human Interaction with Environments (Standard B)	3	1	7	12		12	19
Economics (Standards A, B, and D)	7	1	11	22	3	34	45
Personal and Consumer Economics (Standards A)	1	1	5	10	1	14	19
Economic Systems/Comparative Systems (Standards B and C)	4		4	8	2	16	20
International Trade and Global Interdependence (Standard D)	2		2	4		4	6

CHAPTER 8—DESIGN OF THE VISUAL AND PERFORMING ARTS ASSESSMENT

BLUEPRINT

The visual and performing arts assessment includes four disciplines: dance, music, theater, and visual arts. The arts framework is based on Maine's *Learning Results*, which identifies three content standards in the arts as listed below:

- **Creative expression:** Students create and/or perform to express ideas and feelings.
- **Cultural heritage:** Students understand the cultural contributions (social, ethical, political, religious dimensions) of the arts, how the arts shape and are shaped by prevailing cultural and social beliefs and values, and recognize exemplary works from a variety of cultures and historical periods.
- **Criticism and aesthetics:** Students reflect upon and assess the characteristics and merits of art works.

These three standards were used to create the reporting category framework for the visual and performing arts, as shown below.

Visual and Performing Arts Framework

Discipline	Standard		
	A. Creative Expression	B. Cultural Heritage	C. Criticism and Aesthetics
Dance			
Music			
Theater			
Visual Arts			

Each row and each column of the framework constitutes a reporting category for school- and district-level results in the MEA—for example, music/cultural heritage. Student-level results were not reported in the visual and performing arts as no common items were used in this area.

It should be noted that not all of the performance indicators associated with each content standard (see *Learning Results*) can be assessed reliably and validly using a paper-and-pencil test. For example, some of the performance indicators included under the standard for "creative

expression" would best be measured in other ways. For this reason, additional methods of assessment for these performance indicators are being studied.

The distribution of items, or emphasis, across the arts disciplines in the MEA varies from one grade level to another, as shown in the table below.

Discipline	Grade		
	4	8	11
Dance	13%	13%	15%
Music	37%	37%	35%
Theater	13%	13%	15%
Visual Arts	37%	37%	35%

CONTENT SPECIFICATIONS

The MEA visual and performing arts assessment included multiple-choice and constructed-response items. Each item type was worth a specific number of points, as shown below:

Type of Question	Possible Score Points
Multiple Choice	0–1
Constructed Response	0–4

TEST DESIGN

The table below summarizes the numbers and types of matrix-sampled and field test items that were used in the 2002-03 visual and performing arts assessment.

Visual and Performing Arts

Session	MATRIX		FIELD TEST		Time (minutes)
	MC	CR	MC	CR	
5A	6	1*	1	1*	25 (+10)

* alternating matrix and field test item

Key

- MC = multiple-choice
- CR = constructed-response

The charts on the following pages outline the total number of possible points—as reported—by learning results and item type.

VISUAL AND PERFORMING ARTS
NUMBER OF POINTS POSSIBLE
GRADE 4

Standard	Common			Matrix			Total Points 120
	MC	CR	Points	MC x 1	CR x 4	Points	
Dance				13	3	25	25
Music				25	3	37	37
Theater				13	3	25	25
Visual Arts				21	3	33	33
Creative Expression (Standard A)				32	4	48	48
Cultural Heritage (Standard B)				17	4	33	33
Criticism and Aesthetics (Standard C)				23	4	39	39

VISUAL AND PERFORMING ARTS
NUMBER OF POINTS POSSIBLE
GRADE 8

Standard	Common			Matrix			Total Points 120
	MC	CR	Points	MC x 1	CR x 4	Points	
Dance				9	3	21	21
Music				27	3	39	39
Theater				9	3	21	21
Visual Arts				27	3	39	39
Creative Expression (Standard A)				27	3	39	39
Cultural Heritage (Standard B)				23	4	39	39
Criticism and Aesthetics (Standard C)				22	5	42	42

VISUAL AND PERFORMING ARTS
NUMBER OF POINTS POSSIBLE
GRADE 11

Standard	Common			Matrix			Total Points 120
	MC	CR	Points	MC x 1	CR x 4	Points	
Dance				10	3	22	22
Music				26	2	34	34
Theater				11	3	23	23
Visual Arts				25	4	41	41
Creative Expression (Standard A)				27	4	43	43
Cultural Heritage (Standard B)				22	3	34	34
Criticism and Aesthetics (Standard C)				23	5	43	43

CHAPTER 9—DESIGN OF THE HEALTH EDUCATION ASSESSMENT

BLUEPRINT

The health framework was based on Maine's *Learning Results*, which identifies six **content standards** as shown below:

- **Health concepts:** Students understand health promotion and disease prevention concepts.
- **Health information, services, and products:** Students know how to acquire valid information about health issues, services, and products.
- **Health promotion and risk reduction:** Students understand how to reduce their health risks through the practice of healthy behaviors.
- **Influences on health:** Students understand how media techniques, cultural perspectives, technology, peers, and family influence behaviors that affect health.
- **Communication skills:** Students understand that skillful communication can contribute to better health for them, their families, and the community.
- **Decision making and goal setting:** Students learn how to set personal goals and make decisions that lead to better health.

These six standards were combined with the ten health education content areas identified by the 1984 Education Reform Act to create a reporting category framework for health, as shown on the next page.

Health Framework						
	Health Standard					
Content Area	A. Health Concepts	B. Health Information, Services, and Products	C. Health Promotion and Risk Reduction	D. Influences on Health	E. Communication Skills	F. Decision Making and Goal Setting
Community, Consumer, and Environmental Health						
Personal and Nutritional Health						
Family Life Education and Growth and Development						
Safety and Injury Prevention						
Tobacco, Alcohol, and Other Drug Use Prevention						
Prevention and Control of Disease and Disorders						
Total	30%	70%				

Thirty percent of the items measured health standard A; they were divided among the six content areas. The remaining 70% of the items was divided among B through F and the six content areas. The distribution of items was 10% to 20% for each standard, determined by its developmental appropriateness for the specific grade being assessed.

A portion of the items in the health assessment was developed by the Health Education Assessment Project for the State Collaborative on Assessment and Student Standards (SCASS) under the auspices of the Council of Chief State School Officers. Each SCASS item that was used or adapted was aligned with a performance indicator from Maine's health education standards. Maine educators on the content development committee developed the remainder of the items.

CONTENT SPECIFICATIONS

The MEA health assessment included multiple-choice and constructed-response items. Each item type was worth a specific number of points in the student's total health score, as shown below.

Type of Item	Possible Score Points
Multiple Choice	0–1
Constructed Response	0–4

TEST DESIGN

The table below summarizes the numbers and types of matrix-sampled and field test items that were used in the 2002-03 health education assessment for all grades.

GRADES 4, 8, AND 11

Session	MATRIX		FIELD TEST		Time (minutes)
	MC	CR	MC	CR	
4A	7	2			40 (+10)
5A			2	1*	40 (+10)

* alternating matrix and field test item

Key

- MC = multiple-choice
- CR = constructed-response

The charts on the following pages outline the total number of possible points—as reported—by learning results and item type.

HEALTH EDUCATION
NUMBER OF POINTS POSSIBLE
GRADE 4

Standard	Common		Matrix		Total Points 180
	MC	CR	MC X 1	CR X 4	
Health Concepts (Standard A)			28	5	48
Health Information, Services, and Products (Standard B)			15	2	23
Health Promotion and Risk Reduction (Standard C)			20	3	32
Influences on Health (Standard D)			13	3	25
Communication Skills (Standard E)			3	6	27
Decision Making and Goal Setting (Standard F)			5	5	25
Community, Consumer, and Environmental Health			13	3	25
Personal and Nutritional Health			24	3	36
Family Life Education and Growth and Development			11	6	35
Safety and Injury Prevention			16	5	36
Tobacco, Alcohol, and Other Drug Use Prevention			10	5	30
Prevention and Control of Disease and Disorders			10	2	18

HEALTH EDUCATION
NUMBER OF POINTS POSSIBLE
GRADE 8

Standard	Common		Matrix		Total Points 180
	MC	CR	MC X 1	CR X 4	
Health Concepts (Standard A)			50	2	58
Health Information, Services, and Products (Standard B)			9	4	25
Health Promotion and Risk Reduction (Standard C)			12	3	24
Influences on Health (Standard D)			4	5	24
Communication Skills (Standard E)			5	5	25
Decision Making and Goal Setting (Standard F)			4	5	24
Community, Consumer, and Environmental Health			10	6	34
Personal and Nutritional Health			16	4	32
Family Life Education and Growth and Development			12	6	36
Safety and Injury Prevention			16	3	28
Tobacco, Alcohol, and Other Drug Use Prevention			20	3	32
Prevention and Control of Disease and Disorders			10	2	18

HEALTH EDUCATION
NUMBER OF POINTS POSSIBLE
GRADE 11

Standard	Common		Matrix		Total Points 180
	MC	CR	MC X 1	CR X 4	
Health Concepts (Standard A)			43	6	67
Health Information, Services, and Products (Standard B)			10	2	18
Health Promotion and Risk Reduction (Standard C)			10	3	22
Influences on Health (Standard D)			7	4	23
Communication Skills (Standard E)			8	5	28
Decision Making and Goal Setting (Standard F)			6	4	22
Community, Consumer, and Environmental Health			18	2	26
Personal and Nutritional Health			17	5	37
Family Life Education and Growth and Development			9	4	25
Safety and Injury Prevention			13	2	21
Tobacco, Alcohol, and Other Drug Use Prevention			12	6	36
Prevention and Control of Disease and Disorders			15	5	35

SECTION II: TEST ADMINISTRATION

CHAPTER 10—TEST ADMINISTRATION

RESPONSIBILITY FOR ADMINISTRATION

As indicated in the *Principal/Test Coordinator's Manual*, principals and/or their designated MEA coordinator were responsible for the proper administration of the MEA. Manuals and certification forms were used to ensure the uniformity of administration procedures from school to school.

PROCEDURES

Principals and/or the school's designated MEA coordinator were instructed to read the *Principal/Test Coordinator's Manual* prior to testing and to be familiar with the instructions given in the *Test Administrator's Manual*. The *Principal/Test Coordinator's Manual* provided each school with checklists to help them to prepare for testing. The checklists outlined tasks for the schools to perform before, during, and after test administration. Along with these checklists, the *Principal/Test Coordinator's Manual* outlined the nature of the testing material being sent to each school, how to inventory the material, how to track it during administration, and how to return the material once testing was complete. It also contained information about including or excluding students. The *Test Administrator's Manual* also included checklists for the administrators to prepare themselves, their classrooms, and the students for the administration of the test. The *Test Administrator's Manual* contained sections that detailed the procedures to be followed for each test session, and it contained instructions on preparing the material prior to giving it to the principal/coordinator for its return to Measured Progress.

ADMINISTRATOR TRAINING

In addition to distributing the *Principal/Test Coordinator's* and *Test Administrator's Manual*s, the Maine Department of Education, along with Measured Progress, conducted four test

administration workshops to train and inform school personnel about the MEA. Live workshops were presented in Presque Isle, Bangor, Lewiston, and Saco in September.

PARTICIPATION REQUIREMENTS

All students who were considered for accommodations on the MEA were to have had their individual situations reviewed by a group within the school prior to the time of testing. For every student with an identified exceptionality requiring an Individual Educational Plan (IEP), schools were required to hold a Pupil Evaluation Team (PET) meeting that addressed that student's needs for modifications. For other students needing test accommodations who did not have an identified exceptionality, a meeting was required that included one of the student's teachers, the building principal, related services personnel, and, whenever possible, the student's parents. If it was not possible for the parents to attend the meeting, it was required that they be notified of the committee's recommendations for accommodations prior to the time of testing.

Recommended accommodations were to be consistent with those accommodations already being employed in the student's instructional program. Any such accommodations were reflected either in the minutes of the PET meeting (for students requiring an IEP) or in a statement prepared for the cumulative folders of students not requiring IEPs. The following is the suggested statement that schools were given as a model:

The student will/will not participate in the __th-grade Maine Educational Assessment as scheduled during the month of _____ 19__. The following test accommodations will be observed: (list accommodations)

EXCLUSION FROM THE ASSESSMENT

The legislation's intent is for **all** students in grades 4, 8, and 11 to participate in the MEA through standard administration, administration with accommodations, or alternate assessment. Furthermore, any student who is absent during any session or sessions of the MEA is expected to take a makeup test within the two-week testing window. Exclusion was to be considered only as a last resort.

On those occasions where it was deemed necessary to exclude a student from sections of the assessment or from the assessment as a whole, schools were asked to seek the approval of the Department of Education. It was recommended that the exclusion be limited to only those sections of the MEA that were considered inappropriate for that particular student. Exclusion was to be selected only after the various types of modifications available had been fully explored, and it was felt that the assessment would not yield a valid indication of how a student functioned in a given content area. For example, even students who were reading two years below grade level were advised to take the reading section because those scores would give a fair representation of their current level of functioning in reading. If, however, after examining all of the possible modifications, a local school decided that the assessment or sections of it would be inappropriate for a given student, that student could be excluded.

DOCUMENTATION OF MODIFICATIONS OR EXCLUSIONS

Information about the modifications given to students or the reasons for exclusion was provided on page 2 of the student's response booklet. This information was coded in by staff, not students, after testing was completed. The *Principal/Test Coordinator's* and *Test Administrator's Manual* provided directions on coding in the information related to modification(s), partial exclusion, and exclusion, and every student who was totally excluded had to be accounted for in the designated section of the response booklet.

STATE PARTICIPATION RATES–FALL 2002
GRADE 4

Student Category and Mode of Participation	Number Enrolled	Number Tested			Percentage Enrolled	Percentage Tested		
		Writing	Reading	Health		Writing	Reading	Health
Category of Participation								
Students enrolled on the first day of testing	15577	15497	15472	15449	100	99	99	99
Ethnicity	15577	15497	15472	15449	100	99	99	99
White (non-Hispanic)	14446	14383	14358	14341	93	100	99	99
Black (non-Hispanic)	212	212	212	212	1	100	100	100
Hispanic	107	107	107	106	1	100	100	99
Asian/Pacific Islander	153	150	150	148	1	98	98	97
American Indian/Alaskan Native	194	189	190	190	1	97	98	98
Multi-ethnic	281	280	279	278	2	100	99	99
Not reported	184	176	176	174	1	96	96	95
Identified Disability	2356	2321	2299	2285	15	99	98	97
Current LEP	130	127	127	124	1	98	98	95
Internet access at home	15577	15497	15472	15449	100	99	99	99
Yes	9998	9992	9978	9995	64	100	100	100
No	5579	5505	5494	5454	36	99	98	98
Mode of Participation								
Students who took the assessment without accommodations		12979	12969	13045		84	84	84
Students who took the assessment with accommodations		2278	2215	2404		15	14	16
Identified disability (PET/IEP)		1826	1729	1903		80	78	79
LEP		33	35	53		1	2	2
504 Plan		61	58	59		3	3	2
Other		372	407	404		16	18	17
Students recommended for participation in alternate assessment (PAAP)		240	288			2	2	
Identified disability (PET/IEP)		198	243			83	84	
LEP		39	40			16	14	
504 Plan		0	0			0	0	
Other		7	9			3	3	

STATE PARTICIPATION RATES–FALL 2002
GRADE 8

Student Category and Mode of Participation	Number Enrolled	Number Tested			Percentage Enrolled	Percentage Tested		
		Writing	Reading	Health		Writing	Reading	Health
Category of Participation								
Students enrolled on the first day of testing	17439	17252	17211	17148	100	99	99	98
Ethnicity	17439	17252	17211	17148	100	99	99	98
White (non-Hispanic)	15899	15767	15728	15675	91	99	99	99
Black (non-Hispanic)	205	201	202	193	1	98	99	94
Hispanic	157	156	157	156	1	99	100	99
Asian/Pacific Islander	170	168	168	168	1	99	99	99
American Indian/Alaskan Native	243	241	240	242	1	99	99	100
Multi-ethnic	516	514	514	513	3	100	100	99
Not reported	249	205	202	201	1	82	81	81
Identified Disability	2525	2447	2433	2412	14	97	96	96
Current LEP	118	114	115	103	1	97	97	87
Internet access at home	17439	17252	17211	17148	100	99	99	98
Yes	13873	13862	13854	13858	80	100	100	100
No	3566	3390	3357	3290	20	95	94	92
Mode of Participation								
Students who took the assessment without accommodations		14996	15026	15092		87	87	88
Students who took the assessment with accommodations		2085	1992	2056		12	12	12
Identified disability (PET/IEP)		1916	1834	1905		92	92	93
LEP		38	38	39		2	2	2
504 Plan		51	47	46		2	2	2
Other		89	82	77		4	4	4
Students recommended for participation in alternate assessment (PAAP)		171	193			1	1	
Identified disability (PET/IEP)		147	167			86	87	
LEP		19	19			11	10	
504 Plan		0	1			0	1	
Other		6	7			4	4	

STATE PARTICIPATION RATES–FALL 2002
GRADE 11

Student Category and Mode of Participation	Number Enrolled	Number Tested			Percentage Enrolled	Percentage Tested		
		Writing	Reading	Health		Writing	Reading	Health
Category of Participation								
Students enrolled on the first day of testing	16203	15798	15742	15761	100	98	97	97
Ethnicity	16203	15798	15742	15761	100	98	97	97
White (non-Hispanic)	14810	14580	14541	14565	91	98	98	98
Black (non-Hispanic)	177	176	173	175	1	99	98	99
Hispanic	135	131	129	129	1	97	96	96
Asian/Pacific Islander	164	163	161	161	1	99	98	98
American Indian/Alaskan Native	151	148	142	142	1	98	94	94
Multi-ethnic	327	327	325	324	2	100	99	99
Not reported	439	273	271	265	3	62	62	60
Identified Disability	1702	1643	1636	1625	11	97	96	95
Current LEP	120	119	119	119	1	99	99	99
Internet access at home	16203	15798	15742	15761	100	98	97	97
Yes	13038	12992	12986	13029	80	100	100	100
No	3165	2806	2756	2732	20	89	87	86
Mode of Participation								
Students who took the assessment without accommodations		14400	14411	14550		91	92	92
Students who took the assessment with accommodations		1286	1213	1211		8	8	8
Identified disability (PET/IEP)		1223	1160	1163		95	96	96
LEP		20	19	14		2	2	1
504 Plan		31	24	25		2	2	2
Other		16	14	13		1	1	1
Students recommended for participation in alternate assessment (PAAP)		112	118			1	1	
Identified disability (PET/IEP)		86	93			77	79	
LEP		3	3			3	3	
504 Plan		0	0			0	0	
Other		23	22			21	19	

STATE PARTICIPATION RATES–SPRING 2003
GRADE 4

Student Category and Mode of Participation	Number Enrolled	Number Tested				Percentage Enrolled	Percentage Tested			
		Mathematics	Science	Social Studies	VPA		Mathematics	Science	Social Studies	VPA
Category of Participation										
Students enrolled on the first day of testing	15500	15378	15400	15407	15337	100	99	99	99	99
Ethnicity	15500	15378	15400	15407	15337	100	99	99	99	99
White (non-Hispanic)	14297	14200	14230	14222	14175	92	99	100	99	99
Black (non-Hispanic)	208	201	193	208	191	1	97	93	100	92
Hispanic	107	105	105	104	104	1	98	98	97	97
Asian/Pacific Islander	161	158	155	159	154	1	98	96	99	96
American Indian/Alaskan Native	204	202	203	202	203	1	99	100	99	100
Multi-ethnic	294	292	294	293	291	2	99	100	100	99
Not reported	229	220	220	219	219	1	96	96	96	96
Identified Disability	2403	2362	2369	2366	2345	16	98	99	98	98
Current LEP	128	120	104	125	103	1	94	81	98	80
Internet access at home	15500	15378	15400	15407	15337	100	99	99	99	99
Yes	10968	10963	10959	10960	10962	71	100	100	100	100
No	4532	4415	4441	4447	4375	29	97	98	98	97
Mode of Participation										
Students who took the assessment without accommodations		12613	12657	12687	12789		82	82	82	83
Students who took the assessment with accommodations		2628	2639	2596	2548		17	17	17	17
Identified disability (PET/IEP)		2014	2057	2037	2012		77	78	78	79
LEP		89	62	61	60		3	2	2	2
504 Plan		66	67	67	65		3	3	3	3
Other		475	469	446	426		18	18	17	17
Students recommended for participation in alternate assessment (PAAP)		137	104	124			1	1	1	
Identified disability (PET/IEP)		134	98	99			98	94	80	
LEP		1	1	22			1	1	18	
504 Plan		0	0	0			0	0	0	
Other		3	5	4			2	5	3	

STATE PARTICIPATION RATES–SPRING 2003
GRADE 8

Student Category and Mode of Participation	Number Enrolled	Number Tested				Percentage Enrolled	Percentage Tested			
		Mathematics	Science	Social Studies	VPA		Mathematics	Science	Social Studies	VPA
Category of Participation										
Students enrolled on the first day of testing	17367	17043	17102	17071	16981	100	98	98	98	98
Ethnicity	17367	17043	17102	17071	16981	100	98	98	98	98
White (non-Hispanic)	15820	15564	15617	15591	15531	91	98	99	99	98
Black (non-Hispanic)	238	230	233	229	211	1	97	98	96	89
Hispanic	168	165	165	165	162	1	98	98	98	96
Asian/Pacific Islander	177	174	176	176	171	1	98	99	99	97
American Indian/Alaskan Native	251	250	250	250	249	1	100	100	100	99
Multi-ethnic	493	490	492	491	490	3	99	100	100	99
Not reported	220	170	169	169	167	1	77	77	77	76
Identified Disability	2541	2425	2448	2436	2405	15	95	96	96	95
Current LEP	138	135	138	138	112	1	98	100	100	81
Internet access at home	17367	17043	17102	17071	16981	100	98	98	98	98
Yes	14028	13989	14003	13995	14012	81	100	100	100	100
No	3339	3054	3099	3076	2969	19	91	93	92	89
Mode of Participation										
Students who took the assessment without accommodations		14805	14850	14861	14961		87	87	87	88
Students who took the assessment with accommodations		2076	2107	2066	2020		12	12	12	12
Identified disability (PET/IEP)		1903	1938	1907	1864		92	92	92	92
LEP		55	48	47	45		3	2	2	2
504 Plan		53	57	52	51		3	3	3	3
Other		79	80	75	74		4	4	4	4
Students recommended for participation in alternate assessment (PAAP)		162	145	144			1	1	1	
Identified disability (PET/IEP)		138	114	113			85	79	78	
LEP		17	24	24			10	17	17	
504 Plan		0	0	0			0	0	0	
Other		9	9	9			6	6	6	

STATE PARTICIPATION RATES–SPRING 2003
GRADE 11

Student Category and Mode of Participation	Number Enrolled	Number Tested				Percentage Enrolled	Percentage Tested			
		Mathematics	Science	Social Studies	VPA		Mathematics	Science	Social Studies	VPA
Category of Participation										
Students enrolled on the first day of testing	15855	15202	15330	15300	15193	100	96	97	96	96
Ethnicity	15855	15202	15330	15300	15193	100	96	97	96	96
White (non-Hispanic)	14422	14076	14185	14152	14052	91	98	98	98	97
Black (non-Hispanic)	172	160	170	169	169	1	93	99	98	98
Hispanic	142	131	137	135	132	1	92	96	95	93
Asian/Pacific Islander	169	165	166	166	167	1	98	98	98	99
American Indian/Alaskan Native	139	132	133	132	132	1	95	96	95	95
Multi-ethnic	309	297	298	301	299	2	96	96	97	97
Not reported	502	241	241	245	242	3	48	48	49	48
Identified Disability	1641	1551	1569	1558	1540	10	95	96	95	94
Current LEP	108	77	90	90	90	1	71	83	83	83
Internet access at home	15855	15202	15330	15330	15193	100	96	97	96	96
Yes	12574	12545	12545	12548	12559	79	100	100	100	100
No	3281	2657	2785	2752	2634	21	81	85	84	80
Mode of Participation										
Students who took the assessment without accommodations		13925	14035	14024	14034		92	92	92	92
Students who took the assessment with accommodations		1178	1207	1182	1159		8	8	8	8
Identified disability (PET/IEP)		1109	1137	1114	1091		94	94	94	94
LEP		9	9	9	9		1	1	1	1
504 Plan		26	27	27	26		2	2	2	2
Other		37	37	35	36		3	3	3	3
Students recommended for participation in alternate assessment (PAAP)		99	88	94			1	1	1	
Identified disability (PET/IEP)		80	73	71			81	83	76	
LEP		1	1	1			1	1	1	
504 Plan		1	1	1			1	1	1	
Other		18	14	22			18	16	23	

TESTING IRREGULARITIES

Due to the misassignment of students to schools, results for grades 4 and 11 were recalculated. All reports for the affected schools were re-run and distributed. A total of 26 students were involved. There were no irregularities in the student test or response booklets.

SECTION III: DEVELOPMENT AND REPORTING OF SCORES

CHAPTER 11—SCORING

MACHINE SCORED ITEMS

Once the 2002-03 booklets had been logged in, identified with appropriate scannable, pre-printed school information sheets, examined for extraneous materials, and batched, they were moved into the scanning area. For all response booklets (and questionnaires and other forms that require imaging/scanning) to be imaged, this area is the last stop in the processing loop in which the documents themselves are handled.

At that point, 100% of the response documents and other scannable information necessary to produce the required reports had been captured and converted into an electronic format, including all student identification and demographics, selected-response answers, and digital image clips of hand-written responses. The digital image clip information allowed Measured Progress to replicate student responses just as they appeared on the originals, but they had been transferred onto the readers' monitors. From that point on, the entire process—data processing, scoring, "range-finding," data analysis, reporting—was accomplished without further reference to the originals.

The first step in that conversion was the removal of the booklet bindings so that the individual pages could pass through the scanners, one at a time. Once cut, the sheets were put back in their proper boxes and placed in storage until needed for the scanning/imaging process.

Customized scanning programs for all scannables were prepared to selectively read the student response booklets and to format the scanned information electronically according to pre-determined requirements. Any information (including multiple-choice response data) that had been designated time-critical or process-critical was handled first.

In addition to numerous real-time quality control checks, duplex read, a transport printer that prints a unique identifying number on each sheet of each booklet, and on-line editing capability, the 5000i scanners offer features that make them compatible with Internet technology.

SCANNING QUALITY CONTROL

NCS scanners are equipped with many built-in safeguards that prevent data errors. The scanning hardware is continually monitored for conditions that will cause the machine to shut down if standards are not met. It will display an error message and prevent further scanning until the condition is corrected. The areas monitored include document page and integrity checks, user-designed on-line edits, and many internal checks of electronic functions.

Before every scanning shift begins, Measured Progress's operators performed a daily diagnostic routine. This is yet another step to protect data integrity, and one that has been done faithfully for the many years that we have been involved in production scanning. In the rare event that the routine detects a photocell that appears to be out of range, we calibrate that machine and perform the test again. If the read is still not up to standard, we call for assistance from our field service engineer.

As a final safeguard, spot checks of scanned files, bubble by bubble and image by image, were routinely made throughout scanning runs. The result of these precautions, from the original layout of the scanning form to the daily vigilance of our operators, was a scan error rate well below 0.001.

ELECTRONIC DATA FILES

Once the data had been entered and the scanning logs and other paperwork completed, the booklets themselves were put into storage (where they stayed for at least 180 days beyond the close of the fiscal year). When it had been determined that the files were complete and accurate, those files were duplicated electronically and made available for many other processing options. Completed

files were loaded onto our local area network (LAN) for transfer to Measured Progress' proprietary I-Score system for scoring. Those files were then used to identify (and print out) papers to be used in the rangefinding and standard-setting processes and the data was made transferable via the Internet, CD-ROM, or optical disk.

ITEMS SCORED BY READERS

Test and answer materials were handled as little as possible to minimize the possibility of loss, mishandling, or breach of security. Once scanned, either by optical mark reader or the I-Score system, papers were stored securely in areas with limited personnel access.

As explained in the following sections on scoring, the I-Score system itself ensures the security of responses and test items: all scoring is "blind"; that is, no student names are associated with viewed responses or raw scores and all scoring personnel are subject to the same nondisclosure requirements and supervision as regular Measured Progress staff.

I-SCORE

After the 2002-03 test material had been loaded into the LAN, I-Score sent electronically scanned images of student work to individual readers at computer terminals who evaluated each response and recorded each student's score via keypad or mouse entry. When the reader had finished with one response, the next response appeared immediately on the computer screen. In that way, the system guaranteed complete anonymity of individual students and ensured the randomization of responses during scoring.

Although I-Score is based on conventional scoring techniques, it also offers numerous benefits, not the least of which is raising the bar on scoring process capability. Some of the benefits are as follows:

- real-time information on scorer reliability, read-behinds, and overall process monitoring;
- early access to subsets of data for tasks such as standard setting;

- reduced material handling, which not only saves time and labor, but also enhances the security of materials; and
- immediate access to samples of student responses and scores for reporting and analysis through electronic media.

Scoring operations, directed by the manager of scoring services, are carried out by a highly qualified staff. The staff included:

- chief readers, who oversaw all training and scoring within particular subject areas;
- quality assurance coordinators (QACs), who lead rangefinding and training activities and monitor scoring consistency and rates;
- verifiers, who perform read-behinds of readers and assist at scoring tables as necessary; and
- readers, who perform the bulk of the scoring.

Table 11-1 summarizes the qualifications of the 2002-03 MEA quality assurance coordinators and readers.

Table 11-1
Qualifications of 2002-03 QACs and Readers

2002 Fall Administration					
Scoring Responsibility	Educational Credentials				Total
	Doctorate	Masters	Bachelors	Other	
QACs	0	55.56	44.44	0	100%
Readers	4.76	26.67	60.95	7.62	100%
2003 Spring Administration					
Scoring Responsibility	Educational Credentials				Total
	Doctorate	Masters	Bachelors	Other	
QACs	0	50	50	0	100%
Readers	2.11	23.24	54.23	20.42	100%

PRELIMINARY ACTIVITIES

Preliminary activities for scoring included (1) participating in the planning and design of documents to be used for scoring, (2) reviewing items and score guides for rangefinding and training and the creation of rangefinding packets, and (3) selecting scoring staff and training them for scoring.

PLANNING AND DESIGNING DOCUMENTS

Scoring personnel advised project management and DOE staff on the program design in order to support an efficient and effective scoring process. Scoring staff contributed also to the design of

- response documents and the image-capture process to yield acceptable image clips (also defining file format and layout); and
- scoring benchmarks composed of the guide, subject background information, and anchor papers.

REVIEWING ITEMS AND GUIDES (RANGEFINDING)

Before the scheduled start of scoring activities, scoring center staff reviewed test items and scoring guides for rangefinding. At that point, chief readers and selected QACs prepared scorer training materials. Measured Progress's scoring staff (including test developers) selected one or two anchor examples for each item score point. An additional six to ten responses per item were chosen as part of the training pack. The anchor pack consisted of mid-range exemplars, while the training pack exemplars illustrated the range within each score point. The chief readers, who worked closely with QACs for each content area, facilitated the selection of response exemplars. One of the greatest difficulties in the selection of anchor and training exemplars was finding a sufficient number of papers representing the highest scores (4 or 8) as such scores are fairly rare.

SELECTING AND TRAINING SCORING STAFF

SELECTING QUALITY ASSURANCE COORDINATORS (QACS) AND VERIFIERS

Because the read-behinds performed by the QACs and verifiers moderated the scoring process and thus maintained the integrity of the scores, individuals to fill those positions were selected for their accuracy. In addition, QACs, who train readers to score each item in their content areas, were selected for their ability to instruct and for their level of expertise in their content areas.

For this reason, QACs typically are retired teachers who have demonstrated a high level of expertise in their respective disciplines. The ratio of QACs and verifiers to readers was approximately 1:11.

Training Quality Assurance Coordinators and Verifiers

To ensure that all QACs provided consistent training and feedback, the chief readers spent two days training and qualifying the QACs, and the QACs reviewed all items with the verifiers before scoring. In addition, QACs rotated among tables, supervising readers and reading behind verifiers, who in turn read behind a different table of readers each day.

Selecting Readers

Applicants were required to demonstrate their ability by participating in a preliminary scoring evaluation. The I-Score system enables Measured Progress to efficiently measure a prospective reader's ability to score student responses accurately. After having participated in a training session, applicants were required to achieve at least 80% exact scoring agreement for a qualifying pack consisting of 20 responses to a predetermined item in their content area. Those 20 responses were randomly selected from a bank of approximately 150, all of which had been selected by QACs and approved by the chief readers and developers.

Training Readers

The QACs first applied the language of the scoring guide for an item to its anchor pack exemplars. Once discussion of the anchor pack had concluded, readers attempted to score the training pack exemplars correctly. The QACs then reviewed the training pack and answered any questions readers had before actual scoring began. With this system, two aspects of scoring efficiency are in conflict. First, in order to minimize training expense, it is desirable to train each reader on as few items as possible. Second, to prevent reader drift and to minimize retraining requirements, it is desirable to score a given item in a brief period of time. However the lower the number of unique items each reader scores, the greater the number of readers required to score that item quickly. To minimize that conflict, we divided each subject area's readers into two or more groups. On the first

day of scoring, each group was trained to score a different item. When a group had completed all of an item's responses, those readers were trained on another item (or set).

SCORING ACTIVITIES

Student response booklets were digitally scanned and scored on a file server for a dedicated, secure LAN. I-Score then distributed digital images of student responses to readers. Training and scoring took place over a period of approximately two weeks. Items were randomly assigned to readers; thus, each item in a student's response booklet was more than likely scored by a different reader. By using the maximum possible number of readers for each student, the procedure effectively minimized error variance due to reader sampling. All common and matrix constructed-response items were scored once with a 2% read-behind to ensure consistency among readers and accuracy of individual readers.

MONITORING READERS

After a reader scored a student response, I-Score determined whether that response should also be scored by another reader, scored by a QAC or verifier, or routed for special attention. QACs and verifiers used I-Score to produce daily reader accuracy and speed reports. QACs and verifiers were able to obtain current reader accuracy reports and speed reports on-line at any time.

SCORING THE WRITING

Maine teachers and administrators were recruited to score the common writing prompt at in-state scoring sessions that were held in Bangor and Portland, Maine. Teachers who participated in the scoring process developed skills in holistic evaluation of writing using a rubric aligned with the standards outlined in the Maine *Learning Results*. Those skills could then be applied to writing instruction in the classrooms, and the scoring of writing also gave participants an opportunity to read the range of student writing produced at each grade and to connect their current teaching practices with the recommendations in the Maine *Learning Results*. Administrators who participated gained skills helpful in improving the teaching and evaluation of writing in their schools. Maine teachers' involvement

in scoring also created a network of teachers who served as a resource to their local and state schools.

Beginning with the 2001-02 MEA, use of annotations in the scoring of writing was discontinued.

GENERAL SCORING GUIDES

SHORT-ANSWER ITEMS (MATHEMATICS ONLY)

Score Point	Description
2	▪ The student's response provides a complete and correct answer.
1	▪ The student's response is partially correct. ▪ The student's response may be incomplete or contain errors.
0	▪ The student's response is totally incorrect or too minimal to evaluate.
B	▪ Blank/no response.

CONSTRUCTED-RESPONSE ITEMS

Score Point	Description
4	▪ The student completes all important components of the task and communicates ideas clearly. ▪ The student demonstrates in-depth understanding of the relevant concepts and/or processes. ▪ When instructed to do so, the student chooses more efficient and/or sophisticated processes. ▪ When instructed to do so, the student offers insightful interpretations or extensions (e.g., generalizations, applications, and analogies).
3	▪ The student completes the most important components of the task and communicates clearly. ▪ The student demonstrates understanding of major concepts even though he/she overlooks or misunderstands some less important ideas or details.
2	▪ The student completes most important components of the task and communicates those clearly. ▪ The student demonstrates that there are gaps in his/her conceptual understanding.
1	▪ The student shows minimal understanding. ▪ The student addresses only a small portion of the required task(s).
0	▪ The student's response is totally incorrect or irrelevant.
B	▪ Blank/no response.

MEA WRITING SCORING GUIDE 2002-03

Stylistic & Rhetorical Aspects of Writing Topic Idea Development					
1	**2**	**3**	**4**	**5**	**6**
▪ Little topic development and/or organization, few details ▪ Possible evidence of voice ▪ Simplistic language (wording and sentence structures)	▪ Limited topic development, focus, and/or details ▪ Evidence of voice ▪ Limited variety in language used (wording and sentence structures)	▪ Moderate topic development, focus, and details ▪ Some voice ▪ Some variety in language used (wording and sentence structures)	▪ Well developed with control and relevant details ▪ Consistent voice ▪ Variety in language used (wording and sentence structures)	▪ Fully developed with strong details ▪ Sustained voice and/or tone with emerging style ▪ Effective use of language	▪ Topic and details richly developed ▪ Distinctive voice, tone and style ▪ Rich use of language

Topic Development	The overall effect of the paper
Organization	The degree to which the response is: ▪ Focused ▪ Clearly and logically ordered ▪ Clarified by paragraphs
Details	The degree to which the response includes examples that develop the main points.
Language/Style	The degree to which manipulation of language, including vocabulary, word choice, word combination, and sentence variety is effective

Standard English Conventions			
1	**2**	**3**	**4**
▪ Errors seriously interfere with communication and/or ▪ Little control of sentence structure, grammar and usage, and mechanics in **first draft writing**	▪ Errors interfere somewhat with communication and/or ▪ Few or no errors in simplistic or limited text in **first draft writing**	▪ Errors do not interfere with communication and/or ▪ Few errors relative to length of essay or complexity of sentence structure, grammar and usage, and mechanics in **first draft writing**	▪ Control of a variety of sentence structures, grammar and usage, and mechanics ▪ Length and complexity of essay provide opportunity for student to show control of standard English conventions in **first draft writing**

Sentences	The degree to which the response includes sentences that are correct in structure
Grammar and Usage	The degree to which the response demonstrates correct ▪ Use of standard grammatical rules of English ▪ Word usage and vocabulary
Mechanics	The degree to which the response demonstrates correct ▪ Punctuation ▪ Capitalization ▪ Spelling

CHAPTER 12: EQUATING AND SCALING

Scaled scores for the 2002-03 MEA reading, writing, mathematics, science and technology, social studies, health education, and visual and performing arts (VPA) tests were developed by equating the 2002-03 scores to the 2001-02 scores. Equating the scores from alternate forms of a test adjusts for any difference in difficulty and ensures that scores from the different forms are comparable. Because the 2001-02 and 2002-03 versions of each test are developed from the same framework, they may be considered alternate forms. Equating test scores from the 2001-02 and 2002-03 administrations of each test makes it possible to report the results of the 2002-03 administration on the same scale used in the previous year. The equated scores then get transformed to scaled scores. The process of equating and scaling does not change the rank ordering of students, give more weight to particular questions, or change students' performance level classifications.

Equating for MEA used the *anchor-test-nonequivalent-groups* design with external anchor described by Petersen, Kolen, & Hoover (1989). The "anchor test" for reading, mathematics, science and technology, social studies, health education, and visual and performing arts is a set of matrix items included in both test administrations. These items are external to the test in that they do not contribute to the students' raw scores in either administration of the test. For writing, the reading test was used as the "anchor test." Because reading scores for 2001-02 and 2002-03 were equated, the reading scores for the two years are equivalent and can be used in the same way as a set of common items.

The students who took a given test in 2001-02 and 2002-03 are naturally occurring groups, so no assumption could be made regarding their equivalence. Item Response Theory (IRT) is particularly useful in equating for nonequivalent groups (Allen & Yen, 1979). All IRT calibrations performed on the MEA are used for equating purposes only.

Developing equated scores for the 2002-03 MEA involved several steps. The first step was to construct the "anchor test;" that is, to determine the set of equating items. This step did not apply in the case of the writing test. The second step was to calibrate the items in an IRT model. In the item calibration process, the two "forms" of the test (2001-02 and 2002-03) were calibrated to the same score scale using the anchor test. Finally, in the third step, raw score cutpoints were determined for the 2002-03 test and scaling transformation constants were calculated. These values were used to compute the scaled scores, which were then used to report the MEA results.

DETERMINING THE SETS OF EQUATING ITEMS

During the development stage of MEA 2002-03, matrix items that were also administered in 2001-02 were identified as potential equating items. These items were designated based on the following criteria:

1. The average difficulty of the equating items was about the same as their average difficulty on the 2001-02 test.
2. The total points from the equating items are about equivalent to 40% of the total points on the test.
3. The position of each item in the 2002-03 form was about the same as its position in the 2001-02 form.
4. The distribution of the items across different relevant categories (i.e. item types and content areas) was similar to that of the whole test.
5. There was not any significant change in the item from one administration to the other.

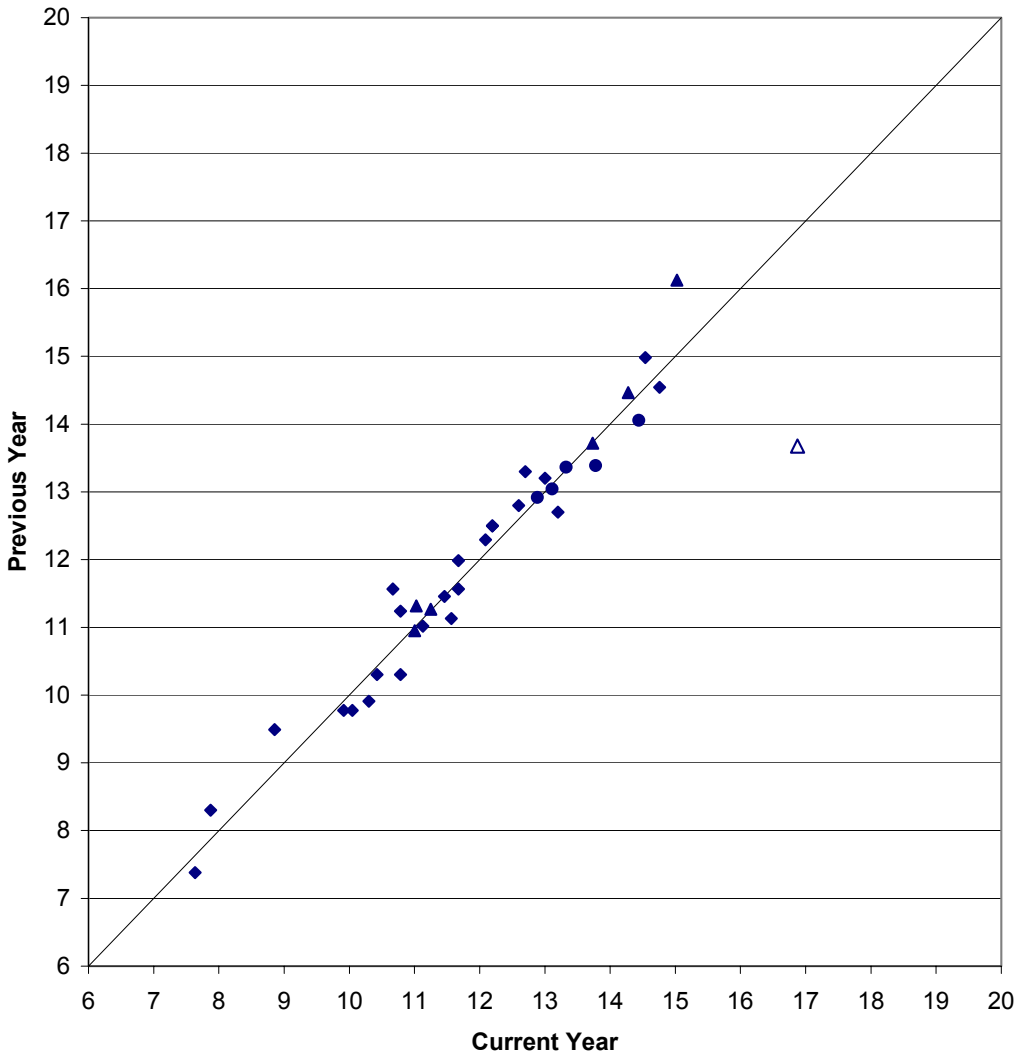
To determine the final set of equating items for each grade level and subject combination, a differential item functioning (DIF) approach using the delta plot method was applied. The p-values of each multiple-choice and short-answer item were transformed to the delta metric. Each item has two p-values, one for each test administration. The delta scale is an inverse normal transformation of

percentage correct to a linear scale with a mean of 13 and standard deviation of 4 (Holland & Wainer, 1993). A high delta value indicates a difficult item. For constructed-response items, the adjusted p-value (the average score divided by the maximum possible score) was transformed to the delta metric. The delta values computed for the potential equating items were plotted for each subject (reading, mathematics, science and technology, social studies, health, and VPA) in each grade level (4, 8, 11).

Figure 12-1 is an example of delta plot for equating items. Different shapes were used to identify different item types: ♦ for multiple-choice items; ▲ for short-answer items; and, ● for constructed-response items. The perpendicular distance of each item to the regression line was computed. The unshaded shape indicates the item with the greatest perpendicular distance from the regression line. Items that were not more than three standard deviations away from the regression line were used as equating items. The delta plots are included in Appendix B.

An additional criterion was applied in order for constructed-response items to be included as equating or anchor items. For each potential equating item, a sample of 200 papers from the 2001-02 test was randomly selected and rescored by this year's scorers. The scores for the two years were compared, and items for which there was a large difference between the average scores were excluded as equating items.

Figure 12-1
Sample Delta Plot
(♦ MC ▲ SA ● CR)



ITEM CALIBRATIONS

Common and matrix items from the 2002-03 MEA were calibrated using IRT. Typically, the two-parameter logistic (2PL) model was used for dichotomous items, along with the graded response model (GRM) for the constructed-response items. Each of these models expresses the likelihood that an examinee will achieve a certain score on a set of items measuring a particular trait as a function of a parameter that is not directly observed. This parameter is commonly referred to as θ and represents

a given student's ability on the trait being measured. Using Parscale, Version 3.2, item parameters were estimated based on those models.

To calibrate items for 2002-03, parameters for the set of equating items were fixed to their calibrated values as calculated above for the 2001-02 test. This ensures that the tests for the two years are calibrated to the same ability scale. The item parameters resulting from the calibration become the basis for equated scores.

Items for 2002-03 writing were calibrated using the same method described above, except that the "equating test" consisted of the reading test, rather than a set of common writing items. Items on the 2001-02 "test" (i.e., the set of reading and writing items) were calibrated as described above. The parameters for the reading test (which was used as the equating test) were then fixed to their 2001-02 calibrated values and the 2002-03 writing items were calibrated to that same scale.

SCALED SCORES FOR READING, MATHEMATICS, SCIENCE AND TECHNOLOGY, AND SOCIAL STUDIES

For reading, mathematics, science and technology, and social studies, IRT parameters resulting from the calibrations were used to estimate student abilities. The estimated student abilities are based only on common items. The cumulative distributions of raw scores and estimated ability scores for each subject and grade combination for 2002-03 and 2001-02 were used to find the equated cutpoints. Thus, for the 2002-03 MEA a new set of cutpoints was obtained. This process is described using Figure 12-2.

Suppose $c_{2001\text{-}02}$ is a cutpoint established in 2001-02. This cutpoint is in the raw score metric. Using the frequency distribution of the raw scores for 2001-02, the cumulative percentage associated with this cutpoint was estimated through linear interpolation. Using the frequency distribution of ability estimates, the θ value associated with this cumulative percentage was determined. Because ability for 2001-02 and 2002-03 are on the same θ scale, the obtained θ value corresponds to the

same ability for both years. The 2002-03 cumulative percentage associated with this θ was then mapped to a 2002-03 raw score through linear interpolation resulting in $c_{2002\text{-}03}$.

The above process was used for each cutpoint set in 2001-02 for each grade for reading, mathematics, science and technology, and social studies. The resulting cutpoints for 2002-03 are presented in Table 12-1. These cutpoints were used to obtain new scaling parameters m_1, m_2, b_1, and b_2 which are then used to compute the scaled scores for 2002-03. The new scaling parameters are presented in Table 12-2.

The functions that translate raw scores to scaled scores are:

$S = m_1 r + b_1$	if $r < P$, and
$S = m_2 r + b_2$	if $r > P$

where S is the scaled score, r is the raw score, and P is the threshold for "Meets the Standard."

SCALED SCORES FOR WRITING

Using reading as the anchor test, 2002-03 writing raw scores were equated to 2001-02 writing raw scores using the method described above for reading, mathematics, science and technology, and social studies. However, instead of using the cumulative distributions to determine the new cutpoints as shown in Figure 12-2, the test characteristic curves (TCCs) were used. A TCC shows the relationship between student ability, θ, and expected scores on a particular test. Because ability for the two years is on the same θ scale, the new cutpoints can be determined directly from the two TCCs. This process is illustrated for the Grade 4 "meets the standard" cutpoint in Figure 12-3. The cutpoint for meeting the standard established in 2001-02 was 20.32. First, we drew a line from the 2001-02 Expected Score of 20.32 (shown on the left-hand axis of the graph). That line intersects the 2001-02 TCC at a θ value of approximately 1.3. We then drew the corresponding line from the point on the 2002-03 TCC at which θ = 1.3 to the right-hand axis of the graph, yielding a 2002-03 proficient cutpoint of 18.69. This same process was then used to find the other two cutpoints for

grade 4, as well as all cutpoints for grades 8 and 11. The 2002-03 writing cutpoints are shown in Table 12.1. Once the cutpoints had been determined, they were then used to obtain the new scaling parameters, m_1, m_2, b_1, and b_2, which were then used to compute the scaled scores for 2002-03. The new scaling parameters are presented in Table 12-2.

Figure 12-2
Finding Equated Cutpoints for Reading, Mathematics, Science and Technology, and Social Studies

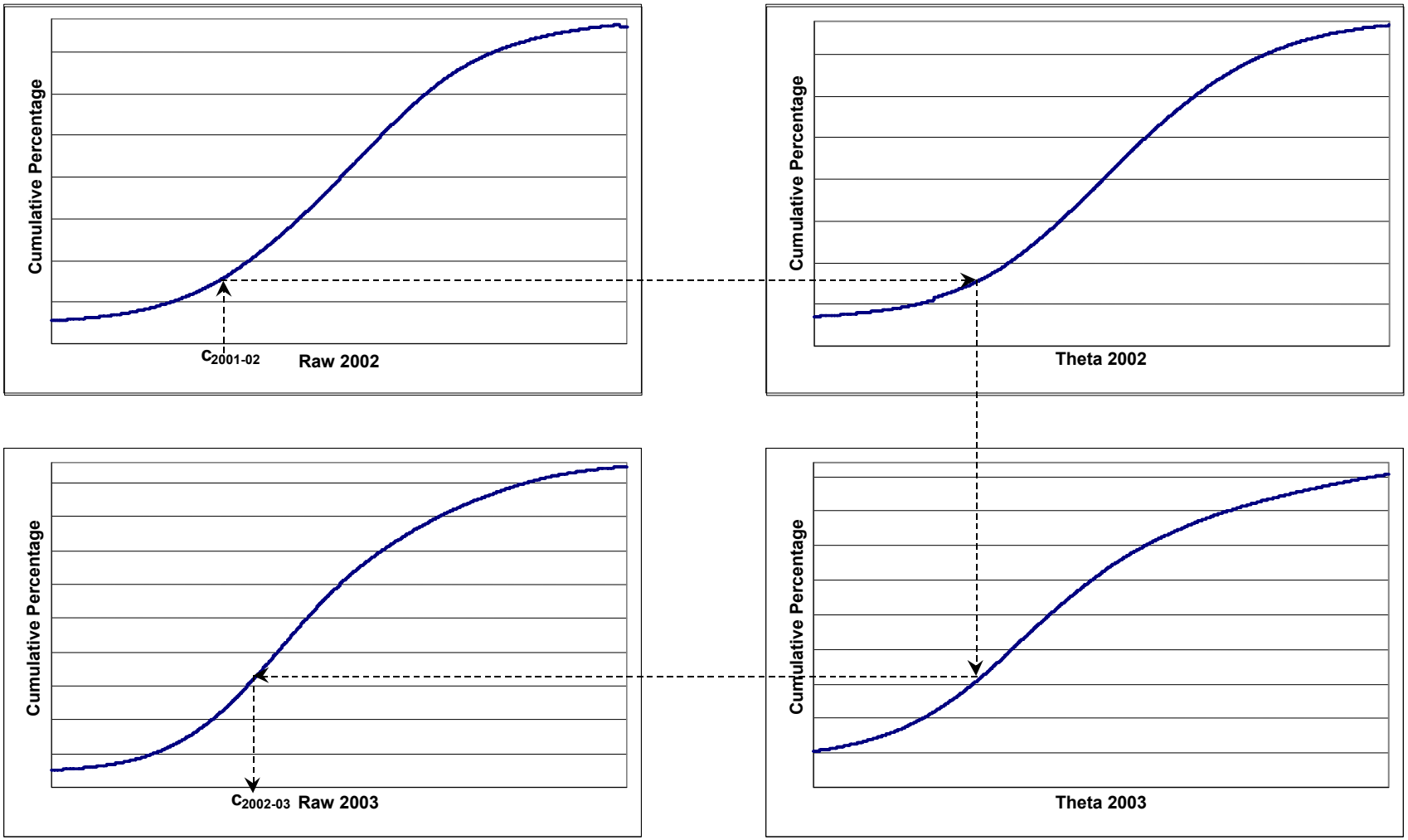


Figure 12-3
Finding Equated Cutpoints for Grade 4 Writing

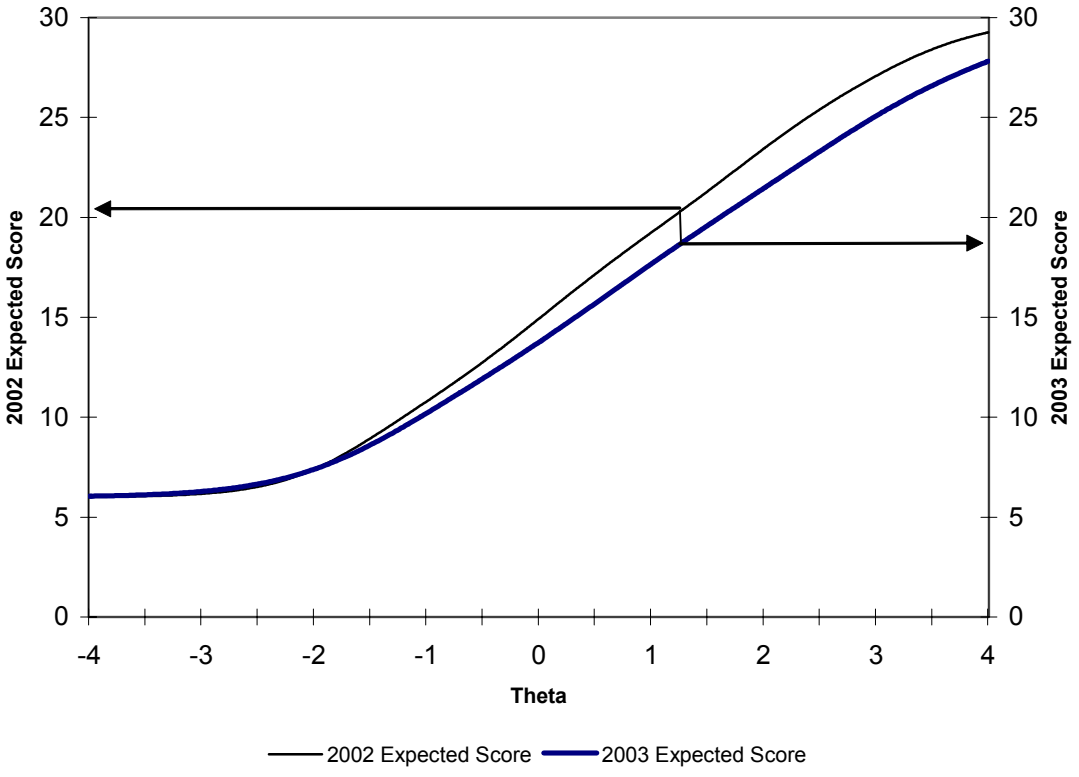


Table 12-1
Threshold (Minimum) Total Test Score For Each Performance Category for Reading, Mathematics, Science and Technology, Social Studies and Writing

Grade	Subject Area	Maximum Score on Test	Threshold Score		
			Exceeds the Standards	Meets the Standards	Partially Meets the Standards
4	Reading	48	42.27	29.55	18.10
	Mathematics	48	44.90	37.20	26.23
	Science and Technology	48	44.13	38.93	24.12
	Social Studies	48	39.08	30.37	20.52
	Writing	30	30.00	19.93	9.47
8	Reading	48	43.03	31.95	20.52
	Mathematics	48	44.39	33.05	20.91
	Science and Technology	48	38.00	30.39	20.65
	Social Studies	48	40.31	31.87	20.26
	Writing	30	28.91	16.78	8.52
11	Reading	48	43.06	31.49	18.28
	Mathematics	48	43.97	30.48	17.17
	Science and Technology	48	40.78	32.72	18.59
	Social Studies	48	39.05	29.22	20.02
	Writing	30	26.58	19.20	10.28

Table 12-2
Transformation Constants Used to Compute Scaled Scores for Reading, Mathematics, Science and Technology, Social Studies and Writing

Grade	Subject Area	Transformation Constants			
		m_1	b_1	m_2	b_2
4	Reading	1.57	494.54	1.75	489.40
	Mathematics	2.60	444.40	1.82	473.15
	Science and Technology	3.84	391.35	1.35	488.42
	Social Studies	2.30	471.20	2.03	479.34
	Writing	1.99	501.43	1.91	502.87
8	Reading	1.80	483.35	1.75	485.07
	Mathematics	1.76	482.73	1.65	486.56
	Science and Technology	2.63	461.13	2.05	478.57
	Social Studies	2.37	465.47	1.72	486.11
	Writing	1.65	513.33	2.42	500.38
11	Reading	1.73	486.52	1.51	493.32
	Mathematics	1.48	495.81	1.50	495.18
	Science and Technology	2.48	459.85	1.42	494.67
	Social Studies	2.03	481.57	2.17	477.48
	Writing	2.71	488.91	2.24	497.95

Tables 12-3 through 12-5 show the scaled score distributions for Reading, Writing, Mathematics, Science and Technology, and Social Studies.

Table 12-3
Scaled Score Distributions - Grade 4

	Reading		Writing		Mathematics		Science/Tech		Social Studies	
Score	N	%	N	%	N	%	N	%	N	%
502	86	0.57			895	5.92	161	1.06	205	1.35
504	36	0.24			210	1.39	153	1.01	81	0.53
506	143	0.95	45	0.30	228	1.51	118	0.78	113	0.75
508	94	0.62	7	0.05	236	1.56	319	2.10	157	1.04
510	97	0.64	2	0.01	255	1.69	212	1.39	187	1.23
512	126	0.84	3	0.02	331	2.19	616	4.05	265	1.75
514	159	1.06	551	3.68	336	2.22	359	2.36	314	2.07
516	179	1.19	398	2.66	777	5.14	936	6.15	351	2.31
518	203	1.35	613	4.10	441	2.92	525	3.45	426	2.81
520	464	3.08	643	4.30	468	3.09	1272	8.36	496	3.27
522	306	2.03	1187	7.93	527	3.48	744	4.89	571	3.76
524	315	2.09	1204	8.04	514	3.40	1544	10.15	648	4.27
526	393	2.61	1593	10.64	540	3.57	829	5.45	674	4.44
528	431	2.86	1359	9.08	583	3.85	1587	10.43	806	5.31
530	446	2.96	1244	8.31	551	3.64	797	5.24	821	5.41
532	585	3.88	1024	6.84	612	4.05	1530	10.06	942	6.21
534	1256	8.34	1052	7.03	634	4.19	714	4.69	915	6.03
536	719	4.77	848	5.67	1310	8.66	651	4.28	943	6.22
538	788	5.23	777	5.19	635	4.20	1042	6.85	882	5.82
540	825	5.48	609	4.07	674	4.46	393	2.58	875	5.77
542	866	5.75	516	3.45			247	1.62	827	5.45
544	1742	11.56	368	2.46	708	4.68			766	5.05
546	869	5.77	269	1.80	639	4.23	179	1.18		
548	782	5.19	236	1.58	605	4.00	123	0.81	701	4.62
550	727	4.83	154	1.03	545	3.60			578	3.81
552	1118	7.42	105	0.70			87	0.57	403	2.66
554	392	2.60	80	0.53	549	3.63			365	2.41
556	314	2.08	39	0.26	447	2.96	51	0.34	301	1.98
558	391	2.60	26	0.17	359	2.37			202	1.33
560	108	0.72	12	0.08			13	0.09	122	0.80
562	53	0.35	4	0.03	239	1.58				
564	28	0.19			164	1.08	6	0.04	111	0.73
566	22	0.15			90	0.60			59	0.39
568	2	0.01					2	0.01	33	0.22
570	1	0.01			22	0.15			16	0.11
572							2	0.01	4	0.03
574									4	0.03
576									1	0.01
578										
580									2	0.01

Note: Scaled scores that correspond to the shaded cells were unassigned.

Table 12-4
Scaled Score Distributions - Grade 8

	Reading		Writing		Mathematics		Science/Tech		Social Studies	
Score	N	%	N	%	N	%	N	%	N	%
502	232	1.38			609	3.63	442	2.62	257	1.53
504	102	0.61			479	2.86	189	1.12	107	0.64
506	90	0.53	18	0.11	307	1.83	263	1.56	333	1.98
508	130	0.77	3	0.02	346	2.06	323	1.91	216	1.28
510	151	0.90	7	0.04	392	2.34	359	2.13	241	1.43
512	168	1.00			1005	5.99	459	2.72	262	1.56
514	396	2.35	198	1.19	536	3.19	549	3.25	330	1.96
516	234	1.39			572	3.41	593	3.52	432	2.57
518	286	1.70	227	1.37	572	3.41	688	4.08	1016	6.03
520	318	1.89	313	1.89	634	3.78	796	4.72	569	3.38
522	391	2.32	377	2.27	1356	8.08	919	5.45	661	3.93
524	428	2.54	712	4.29	640	3.81	1005	5.96	692	4.11
526	505	3.00			769	4.58	1040	6.17	753	4.47
528	1142	6.78	876	5.28	682	4.07	1072	6.36	784	4.66
530	689	4.09	1616	9.74	671	4.00	1077	6.38	1730	10.27
532	689	4.09	1369	8.25	1407	8.39	1066	6.32	868	5.15
534	813	4.83	1428	8.60	606	3.61	1037	6.15	888	5.27
536	794	4.72	1287	7.75	595	3.55	977	5.79	975	5.79
538	848	5.04			588	3.50	896	5.31	837	4.97
540	939	5.58	1365	8.22	1077	6.42	703	4.17	815	4.84
542	1881	11.17	1239	7.47	435	2.59	633	3.75	802	4.76
544	896	5.32	2320	13.98	440	2.62			673	4.00
546	852	5.06	931	5.61	409	2.44	461	2.73	609	3.62
548	825	4.90	643	3.87	352	2.10	429	2.54	515	3.06
550	721	4.28	501	3.02	301	1.79	278	1.65	425	2.52
552	593	3.52	707	4.26	262	1.56				
554	488	2.90	186	1.12	213	1.27	220	1.30	334	1.98
556	419	2.49	132	0.80	290	1.73	159	0.94	233	1.38
558	316	1.88	80	0.48	114	0.68	96	0.57	174	1.03
560	343	2.04	36	0.22	46	0.27			122	0.72
562	69	0.41	25	0.15	43	0.26	65	0.39	73	0.43
564	45	0.27			14	0.08	39	0.23		
566	30	0.18			13	0.08	17	0.10	51	0.30
568	15	0.09			2	0.01	7	0.04	30	0.18
570									21	0.12
572							6	0.04	11	0.07
574							3	0.02	1	0.01
576							2	0.01		
578										
580										

Note: Scaled scores that correspond to the shaded cells were unassigned.

Table 12-5
Scaled Score Distributions - Grade 11

	Reading		Writing		Mathematics		Science/Tech		Social Studies	
Score	N	%	N	%	N	%	N	%	N	%
502	50	0.33	22	0.15	553	3.72	72	0.48	1287	8.60
504	42	0.28			340	2.28	177	1.18	291	1.94
506	121	0.79	2	0.01	407	2.73	154	1.02	311	2.08
508	83	0.55			875	5.88	467	3.11	379	2.53
510	101	0.66			419	2.82	321	2.14	389	2.60
512	241	1.58	152	1.02	465	3.12	353	2.35	407	2.72
514	144	0.95	138	0.93	1001	6.73	927	6.17	428	2.86
516	184	1.21	256	1.72	484	3.25	517	3.44	470	3.14
518	195	1.28	274	1.85	540	3.63	1199	7.98	479	3.20
520	423	2.78	680	4.58	990	6.65	652	4.34	559	3.73
522	251	1.65	549	3.70	518	3.48	1304	8.68		
524	289	1.90	901	6.07	492	3.31	733	4.88	567	3.79
526	697	4.58			970	6.52	672	4.47	527	3.52
528	393	2.58	665	4.48	523	3.51	1369	9.11	586	3.91
530	410	2.69	859	5.79	469	3.15	610	4.06	653	4.36
532	1060	6.96	903	6.08	954	6.41	1299	8.64	631	4.21
534	595	3.91	1185	7.98	421	2.83	543	3.61	586	3.91
536	629	4.13	1034	6.97	405	2.72	510	3.39	585	3.91
538	1419	9.32	1312	8.84	766	5.15	934	6.21	657	4.39
540	813	5.34	1013	6.83	384	2.58	418	2.78	582	3.89
542	808	5.31			337	2.26	335	2.23	595	3.97
544	797	5.24	1113	7.50	601	4.04	294	1.96	605	4.04
546	824	5.41	942	6.35	280	1.88	265	1.76	532	3.55
548	1505	9.89	782	5.27	266	1.79			535	3.57
550	696	4.57			470	3.16	228	1.52	485	3.24
552	552	3.63	649	4.37	183	1.23	182	1.21	399	2.67
554	498	3.27	517	3.48	172	1.16	162	1.08	335	2.24
556	440	2.89	358	2.41	270	1.81	123	0.82	293	1.96
558	342	2.25			116	0.78			263	1.76
560	431	2.83	264	1.78	83	0.56	80	0.53	196	1.31
562	95	0.62	161	1.08	102	0.69	44	0.29	119	0.79
564	62	0.41	69	0.46	19	0.13	39	0.26	102	0.68
566	20	0.13			7	0.05	24	0.16		
568	11	0.07	35	0.24			11	0.07	64	0.43
570			7	0.05					37	0.25
572							9	0.06	24	0.16
574							2	0.01	8	0.05
576									5	0.03
578										
580										

Note: Scaled scores that correspond to the shaded cells were unassigned.

SCALED SCORES FOR HEALTH EDUCATION AND VISUAL AND PERFORMING ARTS

The equating procedure for health education and visual and performing arts is the same as that for reading, mathematics, science and technology, and social studies. However, the scaled scores for health education and visual and performing arts are linear transformations of estimated θ scores and not raw scores like in reading, mathematics, science and technology, and social studies.

The functions that translate $\hat{\theta}$s to scaled scores are

$$\begin{array}{ll} S = m_1 \hat{\theta} + b_1 & \text{if } \hat{\theta} < P, \text{ and} \\ S = m_2 \hat{\theta} + b_2 & \text{if } \hat{\theta} > P \end{array}$$

where S is the scaled score, $\hat{\theta}$ is the ability estimate found using the *expected a posteriori* method (with a prior distribution having a mean of 0.0 and a standard deviation of 1.0), and P is the threshold for "Meets the Standard." The scaling parameters m_1, m_2, b_1, and b_2 are based on the results of standard setting processes implemented for health education and visual and performing arts in 1999. These constants are presented in Table 12-6.

Table 12-6
Transformation Constants Used to Compute Scaled Scores for Health and Visual and Performing Arts

Grade	Subject Area	Transformation Constants			
		m_1	b_1	m_2	b_2
4	Health Education	19.68	533.95	10.13	537.37
	Visual and Performing Arts	8.21	534.14	11.40	531.48
8	Health Education	12.29	537.45	10.74	537.89
	Visual and Performing Arts	9.39	534.99	14.29	531.86
11	Health Education	13.89	536.26	10.78	537.32
	Visual and Performing Arts	5.12	536.29	14.81	527.37

CONTENT AREA SUBCATEGORY SCORES

In addition to content area scaled scores, scores for Content Area Subcategories are also provided on student score reports. These subscores are reported for reading, writing, mathematics, science and technology, and social studies. Subscores are not reported for health education and visual and performing arts because individual student scores are not reported for those content areas. The subcategory scores are shown graphically on the student score reports. To compute subcategory scores, the subset of students who received a score of 542 (the lowest scaled score at which a student has met the standard) was first identified and their average score on the items comprising each subcategory was calculated. Second, the standard deviation of the subcategory scores was calculated, based on the scores of all students. Then, for each student, a standardized score (known as a z-score) could be calculated by subtracting the mean from their score and dividing that difference by the standard deviation:

$$z_X = \frac{X - \overline{X}_{542}}{s_{all}}$$

A student's z-score was positive if he/she scored above the mean, and negative otherwise.

The graph consists of a center line, which represents the mean, and three shaded bands. The innermost band marks off the area of the graph that is within one standard deviation of the mean (z from -1.0 to 1.0), the second band marks the area between one and two standard deviations from the mean (z from -1.0 to –2.0 and 1.0 to 2.0), and the third is between two and three standard deviations from the mean (z from –2.0 to –3.0 and 2.0 to 3.0). For each subcategory, the student's score was represented by a diamond printed in the appropriate place on the graph.

CHAPTER 13: ITEM ANALYSES

As noted in Brown (1983), "a test is only as good as the items it contains." A complete evaluation of a test's quality must include an evaluation of each question. Both the *Standards for Educational and Psychological Testing* and the *Code of Fair Testing Practices in Education* include standards for identifying quality questions. Questions should assess only knowledge or skills that are identified as part of the domain being measured and should avoid assessing irrelevant factors. They should also be unambiguous and free of grammatical errors, potentially insensitive content or language, and other confounding characteristics. Further, questions must not unfairly disadvantage test takers from particular racial, ethnic, or gender groups.

Both qualitative and quantitative analyses are conducted to ensure that MEA questions meet these standards. Previous sections in this report have delineated the qualitative checks on question quality. The current chapter focuses on more quantitative evaluations. The statistical evaluations are presented in three sections: 1) difficulty indices, 2) item-test correlations, and 3) subgroup differences in item performance. The results presented in this chapter are based on the statewide administrations of the MEA in December of 2002 and March of 2003.

DIFFICULTY INDICES

All multiple-choice, short-answer, and constructed-response items were evaluated in terms of difficulty and relationship to overall score according to standard classical test theory practice. Difficulty was measured by averaging the proportion of points received across all students who received the item. Multiple-choice items were scored dichotomously (correct v. incorrect), so for these items the difficulty index is simply the proportion of students who correctly answered the item. Constructed-response items allowed for scores between zero and four. By computing the difficulty index as the average proportion of points received, the indices for multiple-choice, short-answer, and

constructed-response items are placed on a similar scale; the index ranges from zero to one regardless of the item type. Although this index is traditionally described as a measure of difficulty (as it is described here), it is properly interpreted as an easiness index because larger values indicate easier items. An index of zero indicates that no student received credit for the item, and an index of one indicates that every student received full credit for the item.

Items that are answered correctly by almost all students provide little information about differences in student ability, but they do indicate knowledge or skills that have been mastered by most students. Similarly, items that are correctly answered by very few students may indicate knowledge or skills that have not yet been mastered by most students, but such items provide little information about differences in student ability. In general, to provide best measurement, difficulty indices should range from near-chance performance (.25 for four-option, multiple-choice items or essentially zero for short-answer and open-response items) to .90. Indices outside this range indicate items that were either too difficult or too easy for the target population.

Although difficulty is an important item characteristic, the relationship between performance on an item and performance on the whole test or a relevant test section may be more critical. An item that assesses relevant knowledge or skills should relate to other items that are purported to be measuring the same knowledge or skills.

ITEM-TEST CORRELATIONS

Within classical test theory, these relationships are assessed using correlation coefficients that are typically described as either item-test correlations or, more commonly, discrimination indices. The discrimination index used to analyze MEA multiple-choice items was the point-biserial correlation between item score and a criterion total score on the test. As such, the index ranges from –1 to 1, with the magnitude and sign of the index indicating the relationship's strength and direction, respectively. For constructed-response items, item discrimination indices were based on the Pearson

product-moment correlation. The theoretical range of these statistics is also from –1 to 1, with a typical range from .3 to .6.

In general, discrimination indices are interpreted as indicating the degree to which high- and low-ability students perform differently on an item or, equivalently, the degree to which performance on an item helps to differentiate between high- and low-ability students. From this perspective, indices near 1 indicate that high-ability students are more likely to answer the item correctly, indices near –1 indicate that low-ability students are more likely to answer the item correctly, and indices near 0 indicate that the item is equally likely to be answered correctly by high- and low-ability students.

Discrimination indices can be thought of as measures of how closely an item assesses the same knowledge and skills assessed by other items contributing to the criterion total score; that is, the discrimination index can be interpreted as a measure of construct consistency. In light of this interpretation, the selection of an appropriate criterion total score is crucial to the interpretation of the discrimination index. For the 2002-03 MEA the criterion score for each common item is the total score for all common items. For each matrix item the criterion score is the total score for the form that item belongs to.

SUMMARY OF ITEM ANALYSIS RESULTS

Summary statistics of the difficulty and discrimination indices for each item are provided in Tables 13-1 through13-3. In general, the item difficulty and discrimination indices are in acceptable and expected ranges. Very few items were answered correctly at near-chance or near-perfect rates. Similarly, the positive discrimination indices indicate that most items were assessing consistent constructs, and students who performed well on individual items tended to perform well overall. There was a small number of items with near-zero discrimination indices, but none was reliably negative. Occasionally, items with less desirable statistical characteristics need to be included in

assessments to ensure that content is appropriately covered, but there were very few such cases on the MEA.

A comparison of indices across grade levels is complicated because these indices are population dependent. Direct comparisons would require that either the items or students were common across groups. However, one can say that with respect to multiple-choice items, in some content areas (reading, social studies), difficulty indices were fairly similar across grade levels, while in other content areas (math, science and technology) the difficulty indices tended to decrease as grade level increased. Finally, in health, the multiple choice difficulty indices increased as grade level increased while in VPA, the indices for grades 4 and 8 were about the same while the index for grade 11 was lower.

Comparing the difficulty indices of multiple-choice and short-answer or constructed-response items is inappropriate because multiple-choice items can be answered correctly by guessing. Thus, it is not surprising that the difficulty indices for multiple-choice items tend to be higher (indicating easier items) than the difficulty indices for constructed-response items. Similarly, the partial credit allowed for open-response items is advantageous in the computation of item-test correlations, so the discrimination indices for these items tend to be larger than the discrimination indices of other item types.

Table 13-1
Average Difficulty and Discrimination of Different Item Types For Each Grade-Content Area Combination - Grade 4

Content Area	Statistics	Item Type		
		All	Multiple Choice	Constructed Response
Reading	Difficulty	0.63 (0.18)	0.69 (0.16)	0.43 (0.06)
	Discrimination	0.39 (0.12)	0.35 (0.10)	0.54 (0.05)
	N	130	104	26
Mathematics	Difficulty	0.61 (0.18)	0.65 (0.17)	0.47 (0.12)
	Discrimination	0.36 (0.10)	0.33 (0.08)	0.47 (0.09)
	N	127	94	33
Science and Technology	Difficulty	0.66 (0.16)	0.69 (0.15)	0.48 (0.12)
	Discrimination	0.28 (0.09)	0.26 (0.07)	0.42 (0.04)
	N	138	120	18
Social Studies	Difficulty	0.61 (0.19)	0.65 (0.17)	0.36 (0.08)
	Discrimination	0.30 (0.09)	0.29 (0.08)	0.42 (0.06)
	N	138	120	18
Health	Difficulty	0.62 (0.17)	0.66 (0.17)	0.50 (0.09)
	Discrimination	0.21 (0.07)	0.20 (0.07)	0.25 (0.07)
	N	144	112	32
VPA	Difficulty	0.61 (0.14)	0.64 (0.14)	0.46 (0.07)
	Discrimination	0.22 (0.05)	0.22 (0.05)	0.24 (0.04)
	N	84	72	12

Table 13-2
Average Difficulty and Discrimination of Different Item Types For Each Grade-Content Area Combination - Grade 8

Content Area	Statistics	Item Type		
		All	Multiple Choice	Constructed Response
Reading	Difficulty	0.66 (0.16)	0.71 (0.14)	0.48 (0.06)
	Discrimination	0.37 (0.12)	0.33 (0.08)	0.56 (0.05)
	N	130	104	26
Mathematics	Difficulty	0.48 (0.15)	0.51 (0.14)	0.39 (0.14)
	Discrimination	0.39 (0.12)	0.34 (0.09)	0.52 (0.09)
	N	127	94	33
Science and Technology	Difficulty	0.58 (0.21)	0.61 (0.19)	0.34 (0.12)
	Discrimination	0.29 (0.10)	0.26 (0.08)	0.45 (0.06)
	N	138	120	18
Social Studies	Difficulty	0.62 (0.16)	0.65 (0.15)	0.43 (0.07)
	Discrimination	0.34 (0.11)	0.31 (0.08)	0.54 (0.05)
	N	137	119	18
Health	Difficulty	0.65 (0.17)	0.71 (0.14)	0.44 (0.09)
	Discrimination	0.25 (0.09)	0.22 (0.08)	0.35 (0.05)
	N	144	112	32
VPA	Difficulty	0.62 (0.18)	0.65 (0.16)	0.4 (0.04)
	Discrimination	0.25 (0.06)	0.25 (0.06)	0.30 (0.05)
	N	84	72	12

Table 13-3 Average Difficulty and Discrimination of Different Item Types For Each Grade-Content Area Combination – Grade 11				
		Item Type		
Content Area	Statistics	All	Multiple Choice	Constructed Response
Reading	Difficulty	0.66 (0.16)	0.69 (0.15)	0.50 (0.08)
	Discrimination	0.38 (0.14)	0.32 (0.09)	0.61 (0.05)
	N	130	104	26
Mathematics	Difficulty	0.42 (0.16)	0.46 (0.15)	0.30 (0.12)
	Discrimination	0.40 (0.15)	0.34 (0.11)	0.59 (0.09)
	N	126	93	33
Science and Technology	Difficulty	0.51 (0.19)	0.53 (0.19)	0.37 (0.08)
	Discrimination	0.32 (0.14)	0.29 (0.11)	0.55 (0.06)
	N	138	120	18
Social Studies	Difficulty	0.61 (0.16)	0.64 (0.15)	0.39 (0.06)
	Discrimination	0.39 (0.13)	0.35 (0.09)	0.62 (0.04)
	N	138	120	18
Health	Difficulty	0.69 (0.17)	0.75 (0.14)	0.48 (0.08)
	Discrimination	0.26 (0.10)	0.22 (0.08)	0.39 (0.06)
	N	144	112	32
VPA	Difficulty	0.57 (0.18)	0.59 (0.18)	0.42 (0.06)
	Discrimination	0.26 (0.08)	0.25 (0.07)	0.36 (0.04)
	N	84	72	12

SUBGROUP DIFFERENCES IN ITEM PERFORMANCE

The *Code of Fair Testing Practices in Education* explicitly states that subgroup differences in performance should be examined when sample sizes permit, and actions should be taken to make certain that differences in performance are due to construct-relevant, rather than irrelevant, factors. The *Standards for Educational and Psychological Testing* includes similar guidelines. As part of the effort to identify such problems, MEA items were evaluated in terms of differential item functioning (DIF) statistics.

DIF procedures are designed to identify items for which subgroups of interest perform differently beyond the impact of differences in overall achievement. For the MEA, the standardization DIF procedure (Dorans and Kulick, 1986) was employed to evaluate subgroup differences between male and female students. This procedure calculates the difference in item

performance for groups of students matched for achievement on the total test. That is, the average item performance is calculated for students at every total score, then an overall average is calculated weighting the total score distribution so it is the same for the two groups. The index ranges from –1 to 1 for multiple-choice and short-answer items and is adjusted to the same scale for constructed-response items. Negative numbers indicate that the item was more difficult for females. Dorans and Holland (1993) suggested that index values between –0.05 and 0.05 should be considered negligible for dichotomously scored items (such as MEA multiple-choice items). Most MEA items fall within this range. Dorans and Holland further stated that dichotomously scored items with values between –0.10 and –0.05 and between 0.05 and 0.10 (i.e., "low" DIF) should be inspected to ensure that no possible effect is overlooked, and that items with values outside the [–0.10, 0.10] range (i.e., "high" DIF) are more unusual and should be examined very carefully. These standards can be applied to constructed-response items by accounting for the larger range of possible index values and scaling appropriately. That is, values of the DIF index for open-response items can range from –4.0 to 4.0, so the corresponding ranges are between -0.2 and 0.2 for negligible difference, between –0.4 and –0.2 and between 0.2 and 0.4 for "low" DIF, and outside [-0.4, 0.4] for "high" DIF.

DIF indices indicate differential performance between two groups. That differential performance may or may not be indicative of bias in the test. Course-taking patterns, group differences in interests, or differences in school curricula can lead to DIF. If subgroup differences in performance are related to construct-relevant factors, the items should be considered for inclusion on a test.

Each item was categorized according to the guidelines adapted from Dorans and Holland (1993). Tables 13-4 to 13-6 provide the number of items in each of the three DIF categories that favor males or females for each grade level tested. There are some MEA items categorized as "low" or "high" DIF. These indices must not be interpreted as indisputable evidence of bias. Both the *Code of Fair Testing Practices in Education* and the *Standards for Educational and Psychological Testing*

assert that test items must be free from construct-irrelevant sources of differential difficulty. If subgroup differences in performance can be plausibly attributed to construct-relevant factors, the items may be included on a test. What is important is to determine if the cause of this differential performance is construct relevant.

Table 13-4
Differential Item Functioning (DIF) Categorization Item Type: Grade 4

Content Area	Item Type	Negligible DIF				Low DIF				High DIF			
		Favor Female	Favor Male	N	%	Favor Female	Favor Male	N	%	Favor Female	Favor Male	N	%
Reading	Multiple Choice	43	44	87	84	5	10	15	14	0	2	2	2
	Constructed Response	22	3	25	96	1	0	1	4	0	0	0	0
Mathematics	Multiple Choice	45	32	77	82	1	15	16	17	1	0	1	1
	Constructed Response	17	14	31	94	0	2	2	6	0	0	0	0
Science and Technology	Multiple Choice	51	40	91	76	7	14	21	18	0	8	8	7
	Constructed Response	10	6	16	89	1	0	1	6	1	0	1	6
Social Studies	Multiple Choice	48	51	99	83	1	18	19	16	0	2	2	2
	Constructed Response	13	4	17	94	1	0	1	6	0	0	0	0
Health	Multiple Choice	39	26	65	58	10	12	22	20	2	23	25	22
	Constructed Response	18	4	22	69	4	0	4	13	0	6	6	19
VPA	Multiple Choice	32	18	50	69	7	11	18	25	1	3	4	6
	Constructed Response	2	0	2	17	9	0	9	75	1	0	1	8

Table 13-5
Differential Item Functioning (DIF) Categorization Item Type: Grade 8

Content Area	Item Type	Negligible DIF				Low DIF				High DIF			
		Favor Female	Favor Male	N	%	Favor Female	Favor Male	N	%	Favor Female	Favor Male	N	%
Reading	Multiple Choice	42	40	82	79	6	13	19	18	0	3	3	3
	Constructed Response	19	1	20	77	6	0	6	23	0	0	0	0
Mathematics	Multiple Choice	30	38	68	72	2	19	21	22	0	5	5	5
	Constructed Response	19	9	28	85	2	3	5	15	0	0	0	0
Science and Technology	Multiple Choice	39	57	96	80	3	16	19	16	0	5	5	4
	Constructed Response	15	2	17	94	1	0	1	6	0	0	0	0
Social Studies	Multiple Choice	27	51	78	66	2	33	35	29	0	6	6	5
	Constructed Response	7	1	8	44	9	0	9	50	1	0	1	6
Health	Multiple Choice	47	39	86	77	8	12	20	18	0	6	6	5
	Constructed Response	13	0	13	41	15	0	15	47	4	0	4	13
VPA	Multiple Choice	33	21	54	75	6	10	16	22	0	2	2	3
	Constructed Response	2	0	2	17	6	0	6	50	4	0	4	33

Table 13-6
Differential Item Functioning (DIF) Categorization Item Type: Grade 11

Content Area	Item Type	Negligible DIF				Low DIF				High DIF			
		Favor Female	Favor Male	N	%	Favor Female	Favor Male	N	%	Favor Female	Favor Male	N	%
Reading	Multiple Choice	42	46	88	0.85	1	14	15	0.14	0	1	1	0.01
	Constructed Response	17	0	17	0.65	9	0	9	0.35	0	0	0	0
Mathematics	Multiple Choice	31	41	72	0.77	5	14	19	0.2	0	2	2	0.02
	Constructed Response	20	6	26	0.79	4	3	7	0.21	0	0	0	0
Science and Technology	Multiple Choice	37	45	82	0.68	5	22	27	0.23	0	11	11	0.09
	Constructed Response	13	2	15	0.83	3	0	3	0.17	0	0	0	0
Social Studies	Multiple Choice	40	51	91	0.76	2	13	15	0.13	0	14	14	0.12
	Constructed Response	8	2	10	0.56	7	0	7	0.39	1	0	1	0.06
Health	Multiple Choice	42	31	73	0.65	8	12	20	0.18	2	17	19	0.17
	Constructed Response	4	0	4	0.13	20	0	20	0.63	4	4	8	0.25
VPA	Multiple Choice	30	17	47	0.65	7	9	16	0.22	4	5	9	0.13
	Constructed Response	1	0	1	0.08	5	0	5	0.42	6	0	6	0.5

CHAPTER 14: RELIABILITY

Although an individual item's performance is an important focus for evaluation, a complete evaluation of an assessment must also address the way that items function together and complement one another. Any measurement includes some amount of measurement error; that is, no measurement can be perfectly accurate. This is true of academic assessments—no assessment can measure students with perfect accuracy; some students will receive scores that underestimate their true ability, and other students will receive scores that overestimate their true ability. Items that function well together produce assessments that have less measurement error; that is, the errors made should be small on average. Such assessments are described as reliable.

There are a number of ways to estimate an assessment's reliability. One approach is to split all test items into two groups and then correlate students' scores on the two half tests. This is known as a split-half estimate of reliability. If the two half-test scores correlate highly, items on the two half tests must be measuring very similar knowledge or skills. This is evidence that the items complement one another and function well as a group. This also suggests that measurement error will be minimal.

The split-half method requires the psychometrician to select which items contribute to each half-test score. This decision may have an impact on the resulting correlation. Cronbach (1951) provided a statistic that avoids this concern about the split-half method. Cronbach's α coefficient is an estimate of the average of all possible split-half reliability coefficients.

RELIABILITY AND STANDARD ERRORS OF MEASUREMENT

Table 14-1 presents descriptive statistics, Cronbach's α coefficient, and raw and scaled score standard errors of measurement for each subject separately for each grade level. Cronbach's α is computed using the following formula:

$$\alpha \equiv \frac{n}{n-1}\left[1-\frac{\sum_{i=1}^{n}\sigma^2\left(Y_i\right)}{\sigma_x^2}\right]$$

where i indexes the item
n is the total number of items,
$\sigma^2\left(Y_i\right)$ represents individual item variance, and
σ_x^2 represents the total test variance

The reported reliabilities for health and VPA are the averages of the computed Cronbach's α across forms. Because it is inappropriate to compute averages of correlations directly, Fisher's Z transformation was used. The average of the Zs was calculated, and the average was transformed back into a correlation coefficient. The low reliability values for health and VPA seen in Table 14-1 can be attributed to the lower number of items in each form in those tests.

Note that two scaled-score standard errors of measurement are presented: one for scaled scores below 542 and one for scaled scores of 542 and above. This is because different slopes were used in the linear transformation to scaled scores at these two different parts of the scaled score range.

Table 14-1
Reliabilities, Standard Errors of Measurement and Descriptive Statistics
MEA 2002-2003

Grade	Content Area	n	Points	Min	Max	Mean	S.D.	Rel.	S.E.M.	Scaled Score <542 S.E.M.	Scaled Score >=542 S.E.M.
4	Reading	15066	48	0	48	28.43	7.34	0.86	2.70	5.89	4.88
	Mathematics	15124	48	2	48	31.55	8.63	0.86	3.21	5.69	6.15
	Science/Tech	15212	48	1	47	27.85	7.02	0.77	3.34	4.46	9.73
	Social Studies	15167	48	2	47	26.73	6.46	0.80	2.92	6.86	7.22
	Writing	14968	30	2	30	13.92	4.53	0.63	2.74	4.22	2.58
	Health*	15277	15	0	15	8.65	2.42	0.46	1.77	3.80	4.79
	VPA*	15142	10	0	10	5.66	1.89	0.45	1.40	8.00	6.78
8	Reading	16838	48	1	47	29.57	7.55	0.86	2.86	5.88	5.36
	Mathematics	16777	48	1	48	24.82	8.65	0.86	3.26	5.35	4.97
	Science/Tech	16868	48	2	44	23.98	6.16	0.80	2.79	6.82	8.43
	Social Studies	16840	48	0	46	26.05	7.24	0.82	3.04	5.78	7.28
	Writing	16596	30	2	30	15.63	4.42	0.60	2.79	3.94	2.59
	Health*	16949	15	0	15	8.52	2.55	0.52	1.76	3.99	3.14
	VPA*	16776	10	0	10	5.49	1.92	0.49	1.37	8.38	6.60
11	Reading	15221	48	0	47	29.70	8.03	0.87	2.90	5.11	5.07
	Mathematics	14882	48	0	47	20.95	10.06	0.88	3.47	4.71	4.37
	Science/Tech	15029	48	0	46	22.68	7.91	0.84	3.17	4.70	7.42
	Social Studies	14971	48	0	46	24.31	8.66	0.87	3.16	6.61	6.34
	Writing	14842	30	2	30	17.09	4.84	0.66	2.83	4.45	3.34
	Health*	15347	15	0	15	8.99	2.50	0.54	1.69	4.23	3.32
	VPA*	14828	10	0	10	5.24	2.04	0.51	1.43	8.65	3.03

*The reported reliability is the average reliability across forms.

The standard error of measurement of each content area test was taken into consideration when reporting individual student scores. These standard errors were computed at each raw score level and used to report error bands around the associated scaled scores. The standard error for a student with a raw score of *Y* was found by using the following formula (Lord & Novick, 1968):

$$se_y = \sqrt{\frac{(n - Y)(Y)}{n - 1}}$$

where n is the total possible raw score. The value of the standard error was then subtracted from and added to the raw score, giving a raw score error band. For purposes of reporting, each raw score and its upper and lower error band limits were then scaled using the appropriate transformation constants. (The scaling process is described in Chapter 12, and the transformation constants can be found in Table 12-2.) If either the upper or lower limit of the error band was outside the range of possible scaled scores, the confidence interval was truncated accordingly. In other words, if the upper limit of the error band for a given score was greater than the highest possible scaled score, the upper limit was set equal to that score.

STRATIFIED COEFFICIENT α

According to Feldt and Brennan (1989) a prescribed distribution of items over categories (such as different item types) indicates the presumption that at least a small, but important, degree of unique variance is associated with the categories. In contrast, Cronbach's coefficient α is built upon the assumption that there are no such local or clustered dependencies. A stratified version of coefficient α corrects for this problem:

$$\alpha_{strat} = 1 - \frac{\sum_{j=1}^{k} \sigma_{x_j}^2 (1-\alpha)}{\sigma_x^2}$$

where j indexes the subtests or categories,

$\sigma_{x_j}^2$ represents the variance of the k individual subtests or categories,

α is the unstratified Cronbach's α coefficient, and

σ_x^2 represents the total test variance

Stratified coefficient α was calculated separately for each common item test and grade level. The stratification was based on item types (multiple choice v. constructed response). These results are provided in Table 14-2.

Table 14-2 Coefficients α and Stratified α MEA 2002–2003							
Grade	Subject	α	α_{mc}	N_{mc}	α_{cr}	N_{cr}	Stratified α
4	Reading	0.86	0.81	24	0.79	6 (24)	0.88
	Mathematics	0.86	0.79	22	0.79	9 (26)	0.88
	Science/Tech	0.77	0.71	24	0.65	6 (24)	0.79
	Social Studies	0.80	0.77	24	0.65	6 (24)	0.81
8	Reading	0.86	0.79	24	0.80	6 (24)	0.88
	Mathematics	0.86	0.79	22	0.75	9 (26)	0.87
	Science/Tech	0.80	0.71	24	0.68	6 (24)	0.81
	Social Studies	0.82	0.74	24	0.77	6 (24)	0.84
11	Reading	0.87	0.80	24	0.84	6 (24)	0.89
	Mathematics	0.88	0.77	22	0.84	9 (26)	0.89
	Science/Tech	0.84	0.75	24	0.78	6 (24)	0.86
	Social Studies	0.87	0.79	24	0.84	6 (24)	0.89

RELIABILITY OF PERFORMANCE LEVEL CATEGORIZATION

All test scores contain measurement error; thus classifications based on test scores are also subject to measurement error. After the performance levels were specified and students were classified into those levels, empirical analyses were conducted to determine the statistical accuracy and consistency of the classifications.

ACCURACY

Accuracy refers to the extent to which decisions based on test scores match decisions that would have been made if the scores did not contain any measurement error. Accuracy must be estimated because errorless test scores do not exist.

CONSISTENCY

Consistency measures the extent to which classification decisions based on test scores match the decisions based on scores from a second, parallel, form of the same test. Consistency can be evaluated directly from actual responses to test items if two complete, parallel, forms of the test are given to the same group of students. This is usually impractical, especially on lengthy tests such as

the MEA. To overcome this issue, techniques have been developed to estimate both accuracy and consistency of classification decisions based on a single administration of a test. The technique developed by Livingston and Lewis (1995) was used for the MEA because their technique can be used with both constructed-response and multiple-choice items.

CALCULATING ACCURACY

All of the accuracy and consistency estimation techniques described below make use of the concept of "true scores" in the sense of classical test theory. A true score is the score that would be obtained on a test that had no measurement error. It is a theoretical concept that cannot be observed, although it can be estimated. Following Livingston and Lewis (1995), the true-score distribution for the MEA was estimated using a four-parameter beta distribution, which is a flexible model that allows for extreme degrees of skewness in test scores.

In the Livingston and Lewis method, the estimated "true scores" are used to classify students into their "true" performance category, which is labeled "true status." After various technical adjustments (which are described in Livingston and Lewis, 1995), a 4×4 contingency table was created for each content area test and grade level. The cells in the table are the proportion of students who were classified into each performance category by the actual (or observed) scores on the MEA (i.e., observed status) and by the "true scores" (i.e., "true status"). As an example, Table 14-3 shows the accuracy contingency table for fourth-grade science and technology. The accuracy contingency tables for all grades and subjects are provided in Appendix C (under step 5). Additional steps in the analysis are also shown in Appendix C.

Table 14-3 Accuracy Contingency Table for Grade 4 Science and Technology				
True Status	Observed Status			
	Does Not Meet the Standards	Partially Meets the Standards	Meets the Standards	Exceeds the Standards
Does Not Meet the Standards	**0.22**	0.05	0.00	0.00
Partially Meets the Standards	0.09	**0.58**	0.02	0.00
Meets the Standards	0.00	0.02	**0.02**	0.00
Exceeds the Standards	0.00	0.00	0.00	**0.00**

Proportions on the diagonal (in bold) indicate exact agreement between the observed status and "true status." If the test were perfectly accurate, all of the off-diagonal cells would be zero. Accuracy is the sum of the diagonal (i.e., the proportion of exact agreement across the four performance levels). In Table 14-3, the diagonal sums to .82, indicating that 82 percent of the students were classified into exactly the same performance categories by their observed scores and their "true scores."

CALCULATING CONSISTENCY

To estimate consistency, the "true scores" are used to estimate the distribution of classifications on an independent, parallel test form. After statistical adjustments (see Livingston and Lewis, 1995), a new 4 × 4 contingency table was created for each test and grade level that shows the proportions of students who were classified into each performance category by the actual test and by another (hypothetical) parallel test form. Consistency, which is the proportion of students classified into exactly the same categories by the two forms of the test, is the sum of the diagonal for the new contingency table. The consistency contingency tables are shown under step 7 in Appendix C.

KAPPA

Another way to measure consistency is to use Cohen's (1960) coefficient κ (kappa), which assesses the proportion of consistent classifications after removing the proportion of consistent classification that would be expected by chance. Cohen's κ can be used to estimate the classification

consistency of a test from two parallel forms of the test. The second form in this case was the one estimated using the Livingston and Lewis (1995) method. Cohen's κ is shown in Table 14-4. Because κ is corrected for chance, the values of κ are lower than the other consistency estimates in Table 14-4.

RESULTS OF ACCURACY, CONSISTENCY, AND KAPPA ANALYSES

The accuracy, consistency, and kappa indices for all grades and subjects are summarized in Table 14-4.

Table 14-4 Estimates of Accuracy and Consistency of Performance Level Classification				
Grade	Subject	Accuracy	Consistency	Kappa (κ)
4	Reading	0.76	0.71	0.51
	Mathematics	0.76	0.69	0.51
	Science and Technology	0.82	0.72	0.46
	Social Studies	0.76	0.66	0.45
	Writing	0.78	0.67	0.29
	Health	0.75	0.65	0.27
	Visual and Performing Arts	0.56	0.46	0.15
8	Reading	0.79	0.70	0.52
	Mathematics	0.80	0.72	0.55
	Science and Technology	0.78	0.69	0.46
	Social Studies	0.78	0.69	0.49
	Writing	0.78	0.69	0.41
	Health	0.75	0.66	0.31
	Visual and Performing Arts	0.56	0.45	0.19
11	Reading	0.79	0.72	0.54
	Mathematics	0.81	0.74	0.60
	Science and Technology	0.81	0.73	0.53
	Social Studies	0.77	0.68	0.54
	Writing	0.72	0.62	0.32
	Health	0.76	0.66	0.29
	Visual and Performing Arts	0.59	0.46	0.16

For certain tests, concern may be greatest regarding decisions made about a particular threshold. For example, if a college gave credit to students who achieved an Advanced Placement test score of four or five, but not one, two, or three, one might be interested in the accuracy of the dichotomous decision, below four versus four or above. Table 14-5 reports accuracy and consistency for various dichotomous categorizations on the MEA. MEA partially meets/meets cut accuracy ranges from .78 to .97, and meets/exceeds accuracy ranges from .96 to .99+. These are relatively high values compared to the 1999 Advanced Placement (AP) accuracy of decisions based on the 2-3 cut and 3-4 cut which range from .84 to .95.

Table 14-5
Accuracy and Consistency of Dichotomous Categorizations

Grade	Subject	Accuracy			Consistency		
		D/P*	P/M*	M/E*	D/P	P/M	M/E
4	Reading	0.90	0.88	0.98	0.89	0.84	0.98
	Mathematics	0.90	0.89	0.97	0.86	0.85	0.96
	Science and Technology	0.86	0.96	0.99+	0.79	0.94	0.99+
	Social Studies	0.91	0.87	0.99	0.86	0.81	0.98
	Writing	0.87	0.91	0.99+	0.79	0.88	0.99+
	Health	0.99	0.78	0.98	0.96	0.71	0.97
	Visual and Performing Arts	0.79	0.80	0.95	0.71	0.73	0.93
8	Reading	0.92	0.88	0.98	0.89	0.83	0.97
	Mathematics	0.90	0.91	0.99+	0.85	0.87	0.99
	Science and Technology	0.87	0.92	0.99	0.82	0.88	0.99
	Social Studies	0.90	0.89	0.99	0.85	0.85	0.99
	Writing	0.95	0.83	0.99+	0.93	0.76	0.99+
	Health	0.97	0.78	0.99+	0.96	0.71	0.99+
	Visual and Performing Arts	0.78	0.79	0.96	0.70	0.72	0.92
11	Reading	0.92	0.89	0.98	0.91	0.84	0.98
	Mathematics	0.91	0.91	0.99	0.87	0.88	0.99
	Science and Technology	0.88	0.94	0.99+	0.82	0.91	0.99
	Social Studies	0.90	0.90	0.97	0.86	0.85	0.96
	Writing	0.92	0.82	0.98	0.87	0.76	0.97
	Health	0.96	0.81	0.99+	0.93	0.74	0.99+
	Visual and Performing Arts	0.69	0.88	0.99+	0.62	0.83	0.97

*D/P = Does not meet/partially meets the standards
P/M = Partially meets/meets the standards
M/E = Meets/exceeds the standards

CHAPTER 15: VALIDITY

As noted in the *Standards for Educational and Psychological Testing*, validity is the most important consideration in test evaluation. Validity refers to whether specific inferences made from test scores are appropriate, meaningful, and useful. There are several types of validity-related evidence that can be used to support appropriate, meaningful, and useful inferences based on test scores.

CONTENT-RELATED EVIDENCE

As noted in the Standards, evidence of test validity begins with test development and continues throughout the entire testing process. Chapters 2 through 9 provide evidence regarding the alignment between the content of the MEA and Maine's *Learning Results*.

EXTERNAL EVIDENCE

External validity of the MEA is conveyed by the relationship of test scores and situational variables such as school transience, course-taking pattern, attitude towards subject matter, and self-image. These situational variables were all based on student questionnaire data collected during the administration of the MEA. Note that not all the questionnaire items referred to in the following subsections were asked regarding all of the subjects assessed by the MEA. Note also that no inferential statistics are included. However, because the numbers of students are large enough, differences in average scores could be shown to be statistically significant.

SCHOOL TRANSIENCE

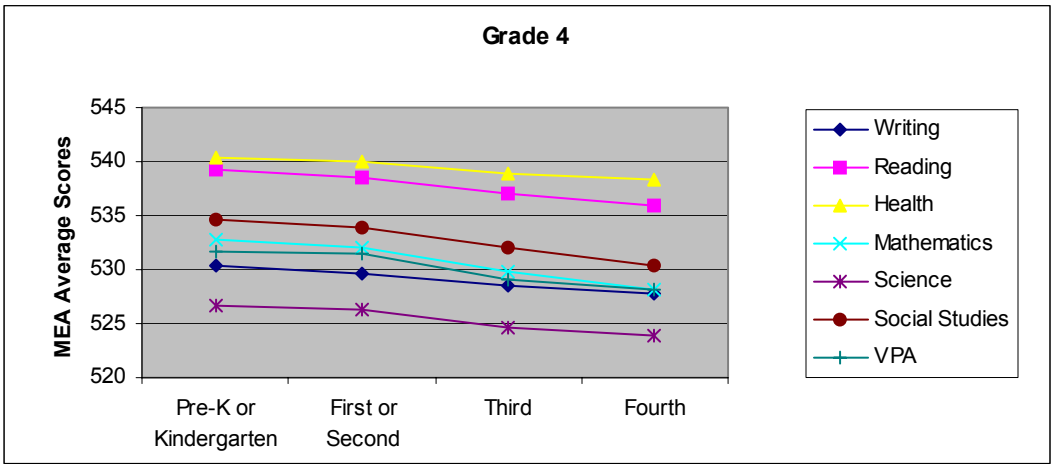
This is an evaluation of how time in a single school is related to test scores. Students were asked, "In what grade did you start coming to school in this school district?" Medsker (1998) found that typically, students who change schools often do not perform as well as students who regularly

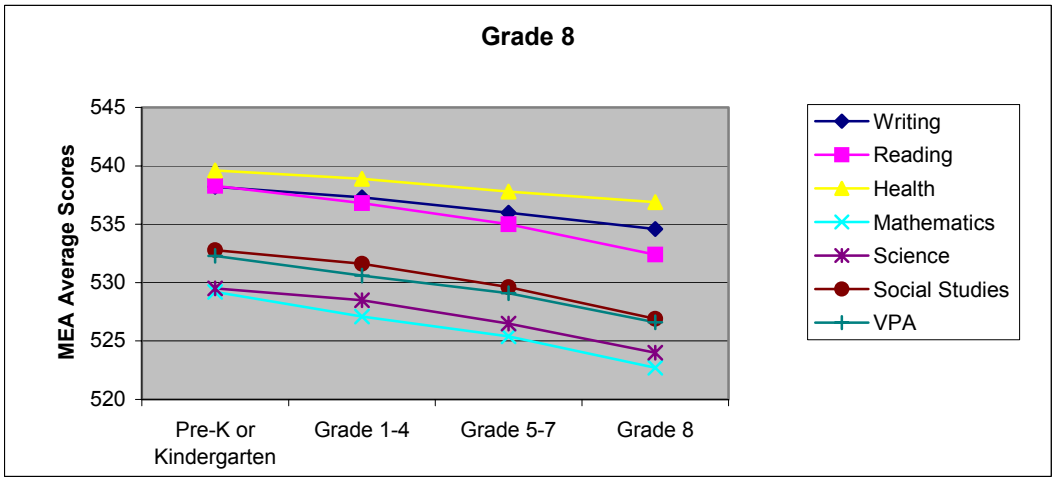
attend a single school or school system. Charts in Figure 15-1 clearly indicate that students who spent more time in a single school tended to have higher test scores in all content areas.

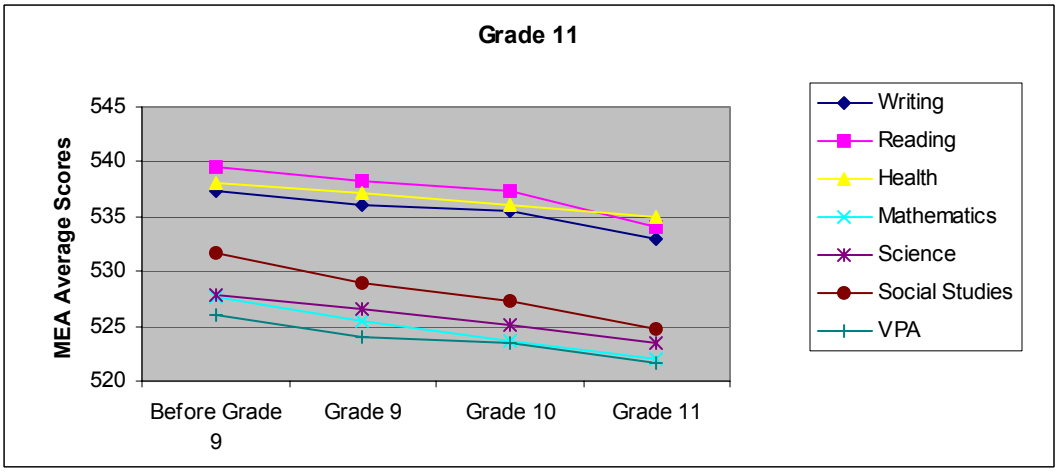
Figure 15-1

School Transience and MEA Scores

Question: In what grade did you start coming to school in this school district?







COURSE-TAKING PATTERN

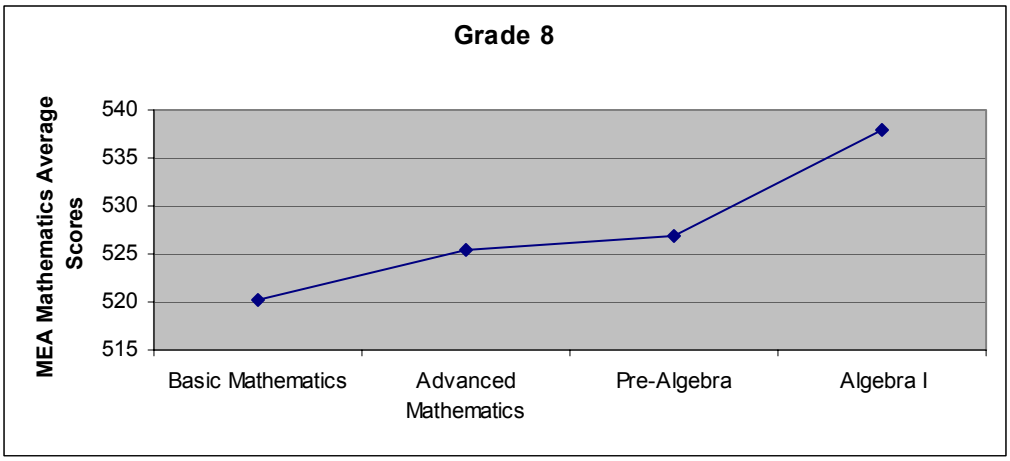
Grade 8 and 11 examinees were asked questions related to their course-taking patterns in mathematics. Eighth-graders were asked, "What best describes the mathematics class you are taking in the eighth grade?" and eleventh-graders were asked, "What mathematics courses will you complete before you graduate?" Charts in Figure 15-2 both show that the higher-level mathematics courses are associated with higher MEA mathematics scores.

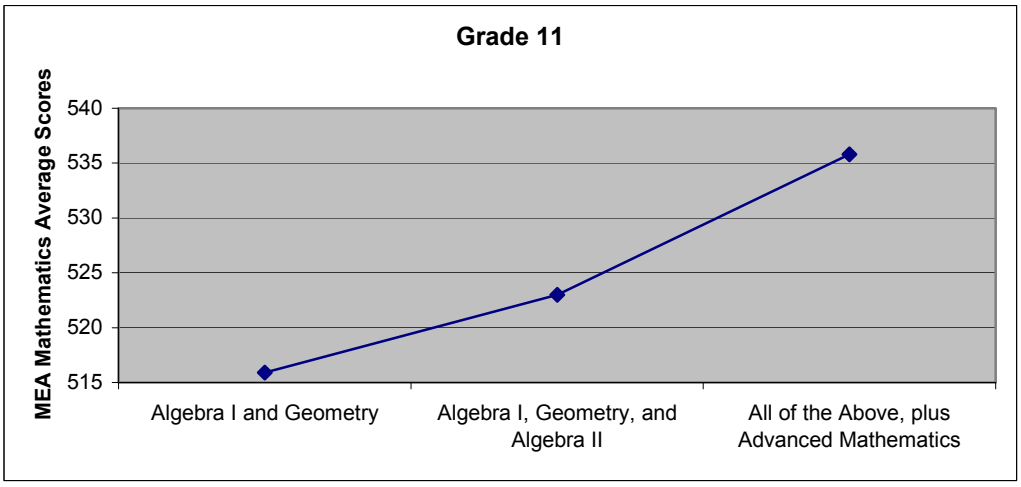
Figure 15-2

MEA Mathematics Scores and Course-Taking Patterns

Grade 8 Question: What best describes the mathematics class you are taking in the eighth grade?

Grade 11 Question: What mathematics courses will you complete before you graduate?





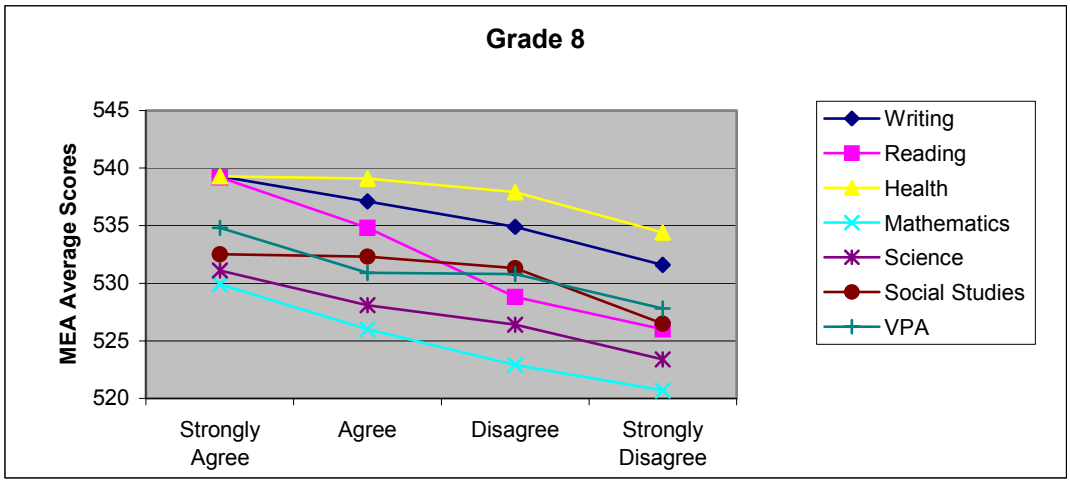
Attitude Towards Subject Matter

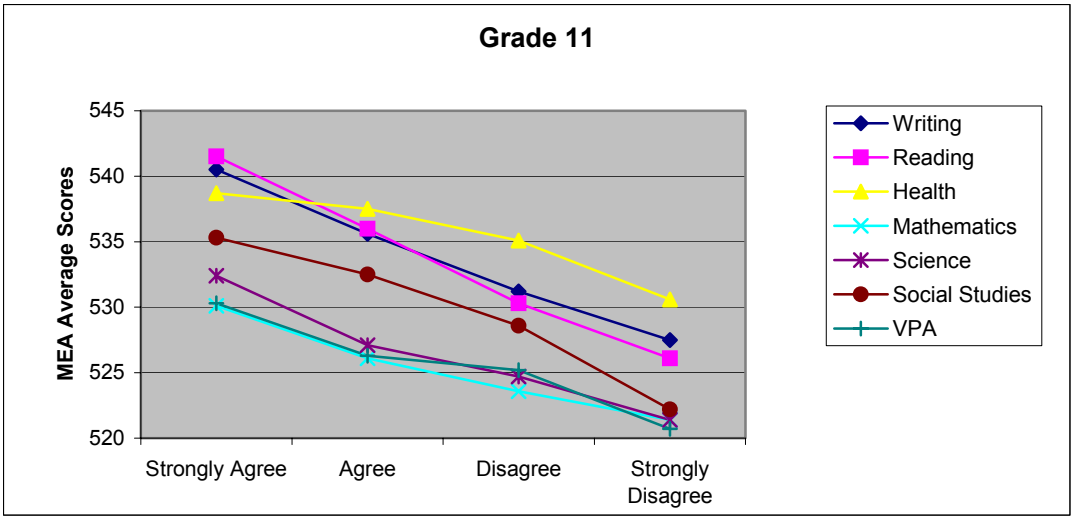
Questionnaire items related to examinees' attitudes toward different subjects tested in the MEA were administered to eighth- and eleventh-graders. For reading, writing, mathematics, science and technology, social studies, and visual and performing arts, students were asked how they feel about the statement, "My knowledge of [subject] will be useful to me in my future work." For health, students were asked how they feel about the statement, "My knowledge about health education will be helpful to me as an adult." Charts in Figure 15-3 indicate that students' attitudes toward the subjects tested in the MEA are related positively with MEA scores.

Figure 15-3

Attitude Towards Subject Matters and MEA Scores

Question: My knowledge of [subject] will be useful to me [in my future work/as an adult].





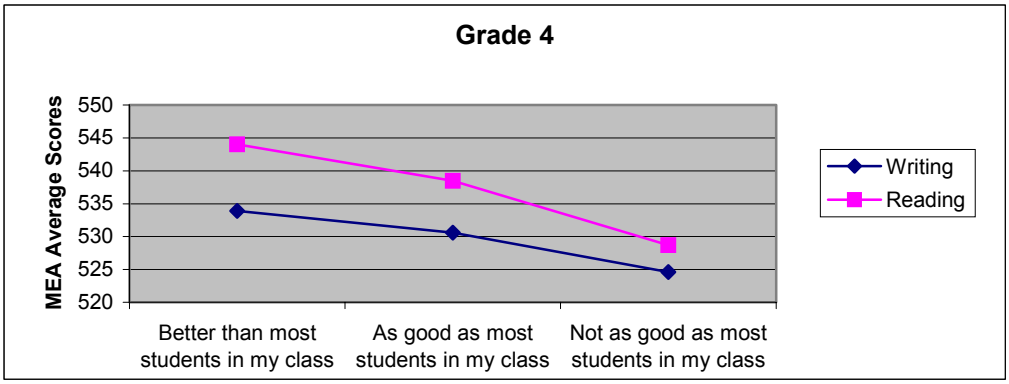
SELF IMAGE

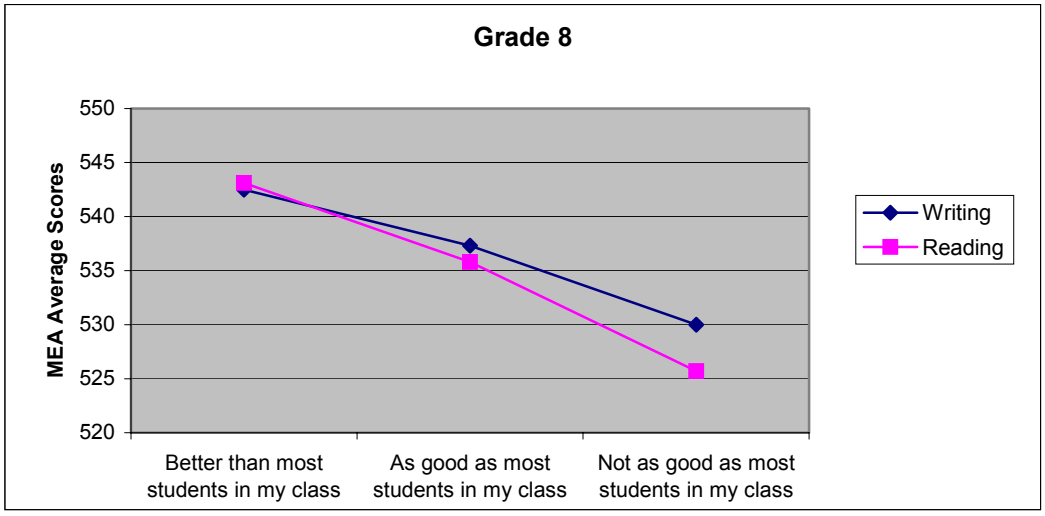
Students in all grades were asked, "How good are you at reading?" and, "How good are you at writing?" Figure 15-4 indicates that there is a positive relationship between students' self-image and their MEA scores in reading and writing.

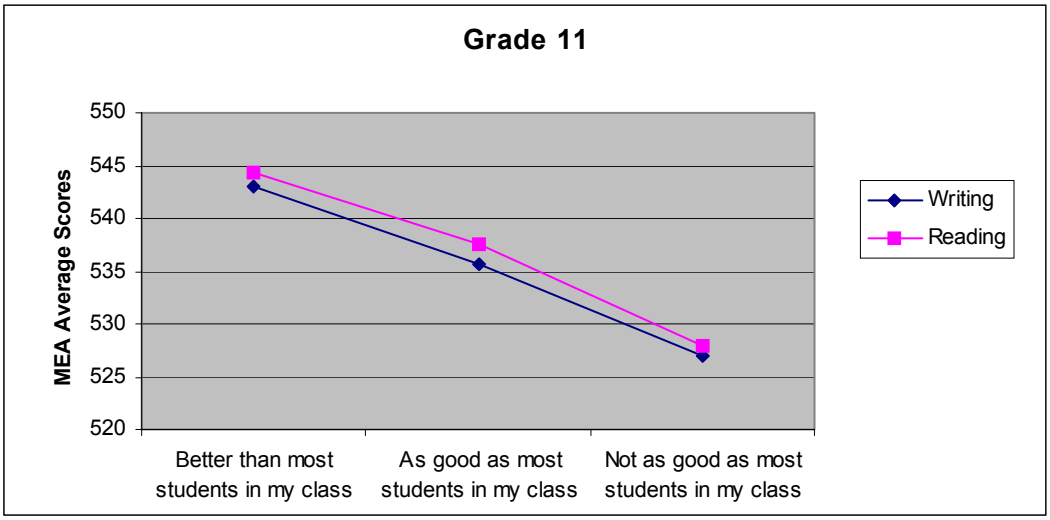
Figure 15-4

Self-Image and MEA Scores

Question: How good are you at reading/writing?




Grade 8
MEA Average Scores
550
545
540
535
530
525
520
Better than most students in my class
As good as most students in my class
Not as good as most students in my class
Writing
Reading

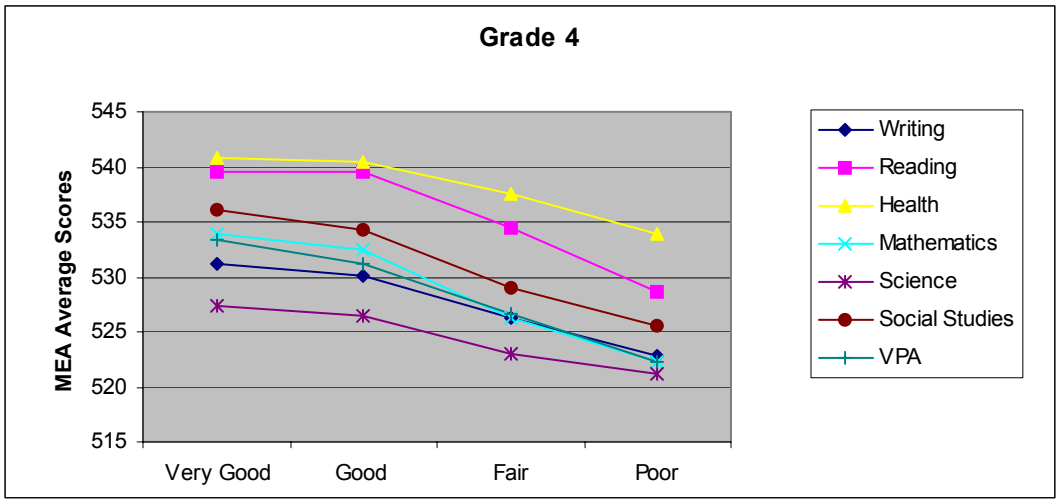

Grade 11
MEA Average Scores
550
545
540
535
530
525
520
Better than most students in my class
As good as most students in my class
Not as good as most students in my class
Writing
Reading

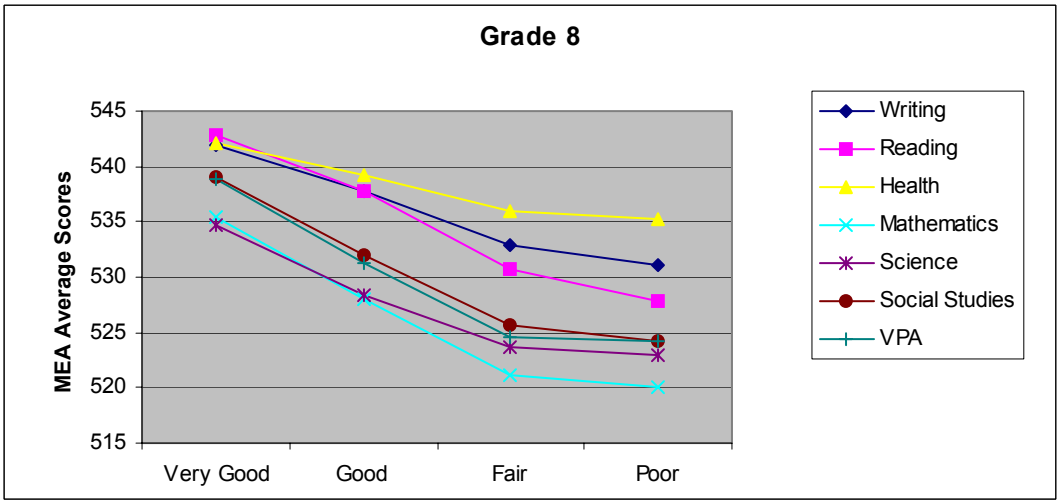
Students in grades 4 and 8 were asked, "Which of the following best describes how you rate yourself as a student?" Figure 15-5 indicates a positive relationship between self-image and MEA scores in all subject areas.

Figure 15-5

Self-Image and MEA Scores

Question: Which of the following best describes how you rate yourself as a student?





CHAPTER 16 — SCORE REPORTING

PRIMARY REPORTS

There were six primary reports for the 2002-03 MEA.

- Student Reports for Parent/Guardian
- Student Labels
- Common Item Class Report
- School Report
- District Report
- Student Writing CD

With the exception of the Student Reports for Parents/Guardians and the student labels, all reports were distributed in PDF format on CDs. In addition, and for the first time, this year schools were provided with manipulable data files of their common item class reports to allow local analysis of student data. Each of these reports is described in the following subsections. Sample reports are provided in Appendix A.

STUDENT REPORT FOR PARENTS/GUARDIANS

The student report is a single-page report that is divided into three sections. The first section gives the student's overall performance for each content area. The student's scaled scores and performance levels are shown, both in a table and graphically. The graph shows the range of possible scaled scores, divided up into the four performance level ranges. For each content area, a diamond is printed in the appropriate location to show the student's scaled score, and a bar is printed around the diamond representing the standard error of measurement.

The second section of the student report compares the student's scores to the average scores for the school, district, and state. For each content area, a bar graph is printed that includes a bar for the student's scaled score and one for each of the three average scores included for comparison.

The third section of the report is a graph that shows the student's performance on the content area subcategories. The graph consists of a center line, which represents average performance for students who meet the standard, and three shaded bands. The innermost band marks off the area of the graph that is within one standard deviation of the mean, the second band marks the area between one and two standard deviations from the mean, and the third is between two and three standard deviations from the mean. For each subcategory, the student's score is represented by a diamond printed in the appropriate place on the graph. (For a complete explanation of the content area subcategories, please see Chapter 12.) The report also includes definitions of the content area subcategories.

The reverse side of the student report provides a description of the performance levels and state summary results.

STUDENT LABELS

To aid schools in keeping track of student scores, schools were supplied with student score information on individual labels that they could affix to files, if desired.

COMMON ITEM CLASS REPORT

The common item class report provides a roster of all the students in each class and indicates their performance on the common items in the assessment. One report is provided for each content area. The student names are listed down the side of the report, and the item numbers are listed across the top. For each item, the following information is provided: the content standard measured by the item, the item type, the correct response (for multiple choice items) and the total possible points for the item. For each student, each multiple-choice item is marked either with a plus sign (+), indicating that the student chose the correct response, or a letter (A-D), indicating which incorrect response the student chose. For constructed-response items, the number of points the student attained is shown. At the end of the item responses, each student's total points earned, scaled score, and performance level are indicated. At the

bottom of the report, the average percent correct on each item is shown for the class, school, district and state.

SCHOOL AND DISTRICT REPORTS

The school and district reports consist of three parts: the first part gives an overall summary of scores, the second provides a summary of student participation, and the third includes a report for each content area with more detailed scores.

The summary of scores includes a table that shows, for each content area, the average scaled score for the school, district, and state for each of the last three years, as well as a cumulative average across the three years. In addition, there is a bar graph for each content area that shows the percentage of students in each performance category at the school, district, and state levels. For the district version of this report, the school information is blank.

The summary of student participation gives the number and percentage of students who participated at the school, district, and state levels for each content area. These numbers are provided for the overall group of students as well as broken down by the following categories:

- ethnic group;
- identified disability;
- LEP status; and
- whether the student has internet access at home.

These numbers are also provided for the overall groups of students as well as by the following modes:

- whether or not the student used accommodations and, for those who used accommodations, the reasons the accommodations were needed; and
- students who were recommended for participation in the alternate assessment, reported overall as well as broken down by the reason for the use of the alternate assessment.

Again, for the district version of this report, the school information is blank.

For each content area, there is a two-page report showing results in more detail. The first page consists of two sections. The first section gives a definition of each of the performance levels along with a table showing the number and percentage of students at the school, district, and state who scored at each level for each of the past three years. The table also shows the cumulative average over the three years. The second section provides results by the content area subcategories and the content standards. For each area, the table shows the total possible number of points and the average number and percent of points attained at the school, district and state levels. The school information is blank on the district-level reports.

The second page of the content area report shows results broken down by a number of different reporting categories (gender, ethnicity, internet access at home, Title 1 program, migrant status, gifted/talented, disability, LEP status, and first grade of attendance in the district) as well as by responses to the questionnaire items. This information is provided for the school and the state on the school-level report and for the district and the state on the district-level report. For this table, results are only reported for groups with 5 or more students.

For each reporting category, the following information is given at the school or district level and at the state level:

- the percentage of students in that category
- the average scaled score for the group
- the percentage in the response category who meet or exceed the standard, partially meet the standard, and do not meet the standard.

For each questionnaire item response category, only the percentage of students in each category is reported at the school or district level. At the state level, the report shows the percentage

of students in each category, the average scaled score, the percentage in the category who meet or exceed the standard, and the percentage who do not meet the standard.

DECISION RULES

To ensure that reported results for MEA 2002-2003 are accurate relative to collected data and other pertinent information, a document that delineates analysis and reporting rules was created. These decision rules were observed in the analyses of MEA test data and in reporting the assessment results. Moreover, these rules are the main reference for quality assurance checks.

An excerpt of the decision rules document used for reporting results of the MEA December 2002 administration is in Appendix D. The same set of rules was used for reporting results of the MEA March 2003 administration, with adjustments made relative to the content areas tested.

The first set of rules pertains to general issues in reporting scores. Each issue is described and pertinent variables are identified. The actual rules applied are described by the way they impacts analyses and aggregations and their specific impact on each of the reports. The general rules are further grouped into issues pertaining to test items, school type, student exclusions, and number of students for aggregations.

The second set of rules pertains to reporting student participation. It describes which students were counted and reported for each subgroup in the student participation report.

QUALITY ASSURANCE

This section describes the different stages of the quality assurance program implemented for the 2002-2003 MEA. The goals of the program are to

- ensure the accuracy of all data reported through independent verification of the calculated data;
- ensure all data reported are placed in the correct position on the report shell; and
- ensure the report shell is grammatically and aesthetically correct.

Checklists that were used in the quality assurance process for MEA are included in Appendix E.

STAGE 1

The MEA Quality Assurance Program commences once the following occurs:

1. The data analyst accepts the raw test data results from Data Processing.
2. The report shells have been updated, quality reviewed, and approved by the DOE.
3. The Decision Rules, including calculation methods, have been documented and approved by the DOE.

STAGE 2

Reference information is collected prior to and during the review process, including

1. District, School and Class names, census, and codes
2. List of students who are reporting exceptions
3. List of home-schooled students
4. Proficiency level scaled score ranges
5. Answer keys, item types, and item categories for sub score reporting
6. Raw score to scaled score conversion tables
7. DOE approved state results

STAGE 3

Review the decision rules for any unique reporting situations and, using the district, school, and class list, select a sample of districts and schools for the QA review, being sure to include districts/schools with unique reporting requirements.

STAGE 4

Score the test for each student. The following steps are completed for each content area.

1. Copy the file from Data Processing with the test results for each student to an excel spreadsheet.

2. Using the item information, score the common items for each child; that is, replace all correct answers with a "1".
3. Compute the raw score for each student by adding up the "1's" for each student.
4. Using the conversion table and the raw score, determine the scaled score and performance level for each student.
5. Using the Decision Rules, remove to a separate spreadsheet all students exempted from reporting. Compare to the lists of exempted students and investigate any differences.

STAGE 5

Compute and verify the state average percent correct for each common item.

STAGE 6

Compute and verify the state Average Performance Score.

STAGE 7

Compute and verify state counts on the Summary of Student Participation page.

STAGE 8

Compute and verify the state performance level percentages.

STAGE 9

Compute state averages and percentages for reporting categories and questionnaire items.

STAGE 10

Using the list of sample districts previously selected, copy the students for each sample district to a separate worksheet. Compute the same averages and percents for the school and district level as in steps E – I above.

STAGE 11

Print all the common item, school, and district reports, labels, and a sample of student reports for the sample districts. Using the above computed data in conjunction with the attached check off

sheet for each report or file, review the report output. If problems are found, two steps are implemented:

1. Advise the Report Programmers or the Data Analyst if there is a problem.
2. Document the problem and follow up and verify the correction was made.

STAGE 12

When all corrections have been made and QA staff is satisfied that the reports are correct, move a copy of the report files to the appropriate folder in FINAL REPORTS and advise that the files may be sent for printing.

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APPENDIX A

SAMPLE REPORTS AND STATE RESULTS

DEPARTMENT OF EDUCATION

2002-2003 School Year Reports

Dear School Board Members and School Personnel:

The Maine Educational Assessment (MEA) is the state's measure of student progress in achieving the challenging academic expectations adopted in 1997 in the *Learning Results*. This report of student performance in reading, writing, and health education on the tests administered in December 2002 is the first of two summary reports you will be receiving for the 2002–2003 school year. The second set of reports available in September 2003 will include results in mathematics, science and technology, social studies, and visual and performing arts.

Beginning with the 2002–2003 school reports, the MEA is converting to an electronic format for distributing results. While the Parent Report continues to be produced on paper, all other reports are distributed through a series of three CDs including

- School and District Reports that provide comprehensive summaries of results;
- Common Item Reports that will, for the first time, include a file to enable local analysis of results;
- the return of student writing samples;
- back up copies of the Parent Report; and
- released test items, scoring guides, and student response samples.

It is hoped that this new electronic format will make the reports more easily available to teachers and the public through posting on school or district Web sites.

The 2002–2003 MEA reports complete the picture of benchmarks necessary for measuring student achievement of the *Learning Results* standards. Over the next few months we will complete a review of the MEA design and the performance standards set nearly five years ago with significant teacher and public input. With this information, any needed refinements to the program will be made, so that combined state and local assessment results will provide the comprehensive student performance data necessary to guide instruction and report on the status of our effort to the public.

I look forward to working with you in support of our continuing efforts to improve the quality and effectiveness of the instructional opportunities designed to help all students achieve high standards.

Sincerely,

Susan A. Gendron

Susan A. Gendron
Commissioner

Educational Assessment School Report

ID:
School:
District:
Grade: 4
Test Date: DECEMBER 2002

Contents of the Report

The report is divided into five main sections including a section describing the students tested and a separate section for the results in each content area.

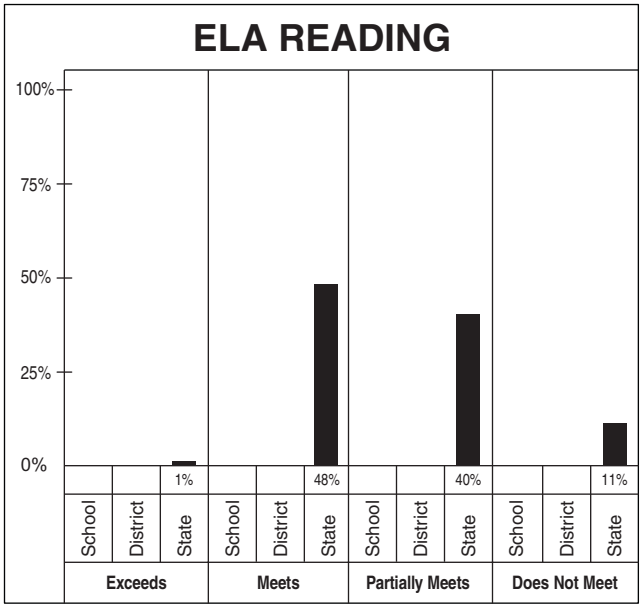
Topic	*Page*
Summary of Scores	2
Summary of Student Participation	3
English Language Arts Reading Results	4-5
English Language Arts Writing Results	6-7
Health Education Results	8-9

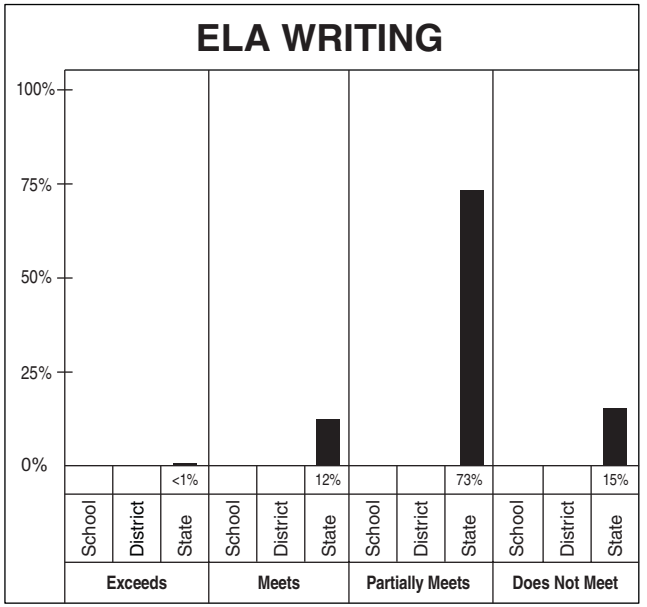
SUMMARY OF SCORES

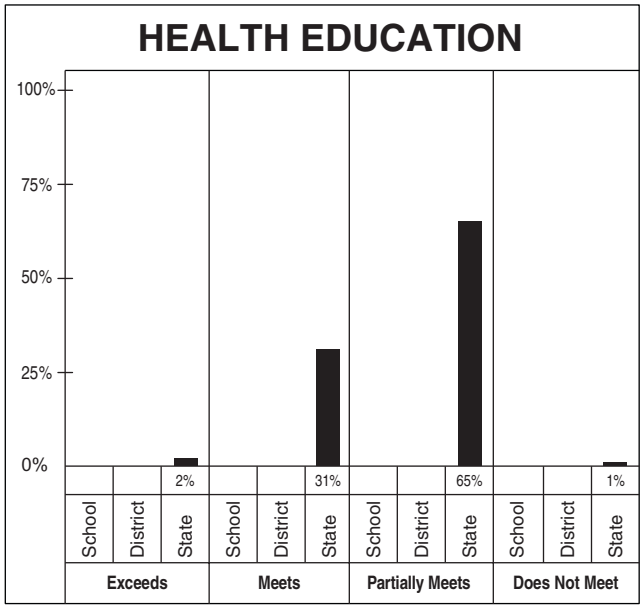
School:
District:
Grade: 4
Date: DECEMBER 2002

Executive Summary of School, District, and State Scores

Year	Average Performance Score		
	School	District	State
ELA READING			
2000–2001			
2001–2002			
2002–2003			
Cum. Avg.			
ELA WRITING			
2000–2001			
2001–2002			
2002–2003			
Cum. Avg.			
HEALTH EDUCATION			
2000–2001			
2001–2002			
2002–2003			
Cum. Avg.			







SUMMARY OF STUDENT PARTICIPATION

School:
District:
Grade: 4
Date: DECEMBER 2002

CONTENT AREA PARTICIPATION[2]

CATEGORY OF PARTICIPATION	Enrollment[1] on the first day of testing						ELA Reading						ELA Writing						Health Education						--					
	School		District		State		School		District		State		School		District		State		School		District		State		School		District		State	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Number of students					15577	100					15472	99					15497	99					15449	99						
Ethnicity					15577	100					15472	99					15497	99					15449	99						
White (non-Hispanic)					14446	93					14358	99					14383	100					14341	99						
Black (non-Hispanic)					212	1					212	100					212	100					212	100						
Hispanic					107	1					107	100					107	100					106	99						
Asian/Pacific Islander					153	1					150	98					150	98					148	97						
American Indian/Alaskan Native					194	1					190	98					189	97					190	98						
Multi-ethnic					281	2					279	99					280	100					278	99						
Not reported					184	1					176	96					176	96					174	95						
Identified disability					2356	15					2299	98					2321	99					2285	97						
Current LEP					130	1					127	98					127	98					124	95						
Internet access at home					15577	100					15472	99					15497	99					15449	99						
Yes					9998	64					9978	100					9992	100					9995	100						
No					5579	36					5494	98					5505	99					5454	98						

MODE OF PARTICIPATION[3]

	ELA Reading						ELA Writing						Health Education						--					
	School		District		State		School		District		State		School		District		State		School		District		State	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Students who took the assessment without accommodations					12969	84					12979	84					13045	84						
Students who took the assessment with accommodations					2215	14					2278	15					2404	16						
Identified disability (PET/IEP)					1729	78					1826	80					1903	79						
LEP					35	2					33	1					53	2						
504 plan					58	3					61	3					59	2						
Other					407	18					372	16					404	17						
Students recommended for participation in alternate assessment (PAAP)					288	2					240	2												
Identified disability (PET/IEP)					243	84					198	83												
LEP					40	14					39	16												
504 plan					0	0					0	0												
Other					9	3					7	3												

[1] Percents are the percentage of students enrolled in each participation category. [2] Percents are the percentage of students in the participation category who participated in the content area.
[3] Percents are the percentage of students in each content area who participated with each mode of participation.

MAINE EDUCATIONAL ASSESSMENT

ELA READING RESULTS

School:
District:
Grade: 4
Date: DECEMBER 2002

PERFORMANCE LEVELS	STUDENTS AT EACH PERFORMANCE LEVEL					
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in English language arts (reading). The work demonstrates exemplary accomplishment in the comprehension of literary and informational texts, in the use of the skills and strategies of reading to answer questions, and in the demonstration of understanding of how words and images communicate (scaled scores: 561–580).	2000–2001					1
	2001–2002					1
	2002–2003					**1**
	Cumulative Average					1
Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in English language arts (reading). The work demonstrates a consistent accomplishment in the comprehension of literary and informational texts, in the use of the skills and strategies of reading to answer questions, and in the demonstration of understanding of how words and images communicate (scaled scores: 541–560).	2000–2001					48
	2001–2002					48
	2002–2003					**48**
	Cumulative Average					48
Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in English language arts (reading). The work demonstrates inconsistent accomplishment in the comprehension of literary and informational texts, in the use of the skills and strategies of reading to answer questions, and in the demonstration of understanding of how words and images communicate (scaled scores: 521–540).	2000–2001					43
	2001–2002					42
	2002–2003					**40**
	Cumulative Average					42
Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in English language arts (reading). The student demonstrates limited accomplishment in the comprehension of literary and informational texts, in the use of the skills and strategies of reading to answer questions, and in the demonstration of understanding of how words and images communicate (scaled scores: 501–520).	2000–2001					8
	2001–2002					10
	2002–2003					**11**
	Cumulative Average					10

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Reading Process and Language (Standards A and C)	**49**					29.5	60
Reading Comprehension (Standards B and D)	**159**					86.3	54
Literature and Culture (Standard B)	**77**					43.7	57
Informational Texts (Standard D)	**82**					42.6	52

MAINE EDUCATIONAL ASSESSMENT

ELA READING RESULTS
(CONTINUED)

School:
District:
Grade: 4
Date: DECEMBER 2002

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						49	540	54	37	9
male						51	537	44	43	13
Ethnicity										
White (non-Hispanic)						93	539	50	40	10
Black (non-Hispanic)						1	533	30	53	17
Hispanic						1	536	40	48	12
Asian/Pacific Islander						1	536	41	46	13
American Indian/Alaskan native						1	533	30	54	16
multi-ethnic						2	538	48	42	10
not reported						1	538	47	39	14
Internet access at home										
yes						65	540	54	37	9
no						35	536	39	47	14
Title 1 program										
students currently served in reading						11	530	17	61	22
students previously served in reading						21	533	28	56	16
Migrant										
students eligible, not served						0	534	33	49	19
students eligible, served, not tutored						1	533	27	50	23
students eligible, served, tutored						1	530	23	50	28
Gifted/talented program										
yes						4	551	94	6	0
no						96	538	47	42	11
Identified disability										
yes						13	524	10	47	43
no						87	541	55	39	6
Language minority/LEP student										
bilingual never identified LEP						0	538	33	67	0
former LEP reclassified non-LEP						0	532	25	56	19
current LEP						1	532	29	47	24
First grade in district										
pre-k or kindergarten						69	539	51	40	9
first or second grade						15	539	48	41	10
third grade						8	537	44	42	14
fourth grade						8	536	40	44	15
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
How many pages do you read each day in school and to complete homework assignments?					
five or fewer pages		22	535	35	17
six to ten pages		24	539	49	9
eleven or more pages		54	541	56	8
Do the questions on this MEA test reflect what you have learned in school about reading?					
Yes, the questions match the reading classes.		29	538	48	12
They match somewhat.		42	541	56	7
They match a little.		21	538	44	11
There is no match.		8	533	33	22
How many books have you read in the past two months?					
none		2	531	26	27
one		7	535	36	15
two to four		32	539	51	9
five or more		59	539	51	10
How often do you search for and read information on a computer?					
never		23	536	38	14
once a month		25	541	58	7
once a week		24	540	52	9
two or more times a week		28	538	48	11
How good are you at reading?					
I am better than most students in my class.		29	544	70	5
I am as good as most students in my class.		57	539	47	8
I am not as good as most students in my class.		14	529	18	29
How difficult were the reading sessions of the MEA test for you?					
very difficult		5	526	15	39
difficult		11	535	37	16
a little difficult		55	540	52	8
not at all difficult		30	540	55	9
How much TV do you watch on school nights?					
none		8	541	58	10
less than one hour		29	540	52	9
one to two hours		34	541	56	7
more than two hours		28	535	35	16

MAINE EDUCATIONAL ASSESSMENT

ELA WRITING RESULTS

School:
District:
Grade: 4
Date: DECEMBER 2002

PERFORMANCE LEVELS	STUDENTS AT EACH PERFORMANCE LEVEL					
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's written compositions at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in English language arts (writing). The student's work demonstrates exemplary accomplishment in both the development of the topic/idea and the use of Standard English conventions in first-draft writing (scaled scores: 561–580).	2000–2001					<1
	2001–2002					<1
	2002–2003					**<1**
	Cumulative Average					<1
Meets the Standards—The quality of a student's written compositions at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in English language arts (writing). The student's work demonstrates proficiency in both the development of the topic/idea and the use of Standard English conventions in first-draft writing (scaled scores: 541–560).	2000–2001					11
	2001–2002					14
	2002–2003					**12**
	Cumulative Average					12
Partially Meets the Standards—The quality of a student's written compositions at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in English language arts (writing). The student's work demonstrates writing skills that may show moderate development of the topic/idea and/or some errors in Standard English conventions that may interfere with communication of ideas (scaled scores: 521–540).	2000–2001					67
	2001–2002					63
	2002–2003					**73**
	Cumulative Average					68
Does Not Meet the Standards—The quality of a student's written compositions at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in English language arts (writing). The student's work demonstrates writing skills that show limited development of the topic/idea and/or many errors in Standard English conventions that interfere with communication of ideas (scaled scores: 501–520).	2000–2001					22
	2001–2002					23
	2002–2003					**15**
	Cumulative Average					20

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Writing (Standards F and G)	**30**					13.9	46
Standard English Conventions (Standard F)	**12**					6.6	55
Stylistic and Rhetorical Aspects of Writing (Standard G)	**18**					7.4	41

MAINE EDUCATIONAL ASSESSMENT

ELA WRITING RESULTS
(CONTINUED)

School:
District:
Grade: 4
Date: DECEMBER 2002

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						49	532	16	74	10
male						51	528	8	71	21
Ethnicity										
White (non-Hispanic)						93	530	12	73	15
Black (non-Hispanic)						1	526	3	76	21
Hispanic						1	529	10	78	12
Asian/Pacific Islander						1	530	16	73	11
American Indian/Alaskan native						1	526	5	69	26
multi-ethnic						2	530	13	71	15
not reported						1	530	18	60	22
Internet access at home										
yes						65	531	14	73	13
no						35	528	8	72	20
Title 1 program										
students currently served in reading						11	525	2	72	26
students previously served in reading						21	526	3	75	23
Migrant										
students eligible, not served						0	527	2	74	24
students eligible, served, not tutored						1	526	2	76	22
students eligible, served, tutored						1	527	7	71	22
Gifted/talented program										
yes						4	540	47	52	1
no						96	529	11	74	16
Identified disability										
yes						13	521	1	44	56
no						87	531	14	77	9
Language minority/LEP student										
bilingual never identified LEP						0	528	0	87	13
former LEP reclassified non-LEP						0	528	11	71	17
current LEP						1	528	6	73	21
First grade in district										
pre-k or kindergarten						69	530	13	73	14
first or second grade						15	530	12	72	16
third grade						8	529	9	72	19
fourth grade						8	528	9	70	22
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
Do you or your teacher keep a collection of your writing?					
A collection of my writing is not kept.		8	526	6	26
A collection of my writing is kept, but I don't use it.		33	529	11	16
A collection of my writing is kept, and I use it to grow as a writer.		59	531	14	13
How often do you have time in class to work on your writing?					
never		2	526	8	29
a few times a week		32	531	14	11
once a week		10	529	9	17
almost every day		56	530	12	16
How often does your teacher show you ways to improve/revise your writing?					
never		3	526	7	25
a few times a month		20	530	13	13
a few times a week		39	531	14	12
almost every day		38	529	11	17
How often does your teacher show you ways to edit your writing for spelling, capitalization, and punctuation?					
never		4	527	9	22
a few times a month		18	531	14	13
a few times a week		36	530	13	14
almost every day		43	529	11	16
How good are you at writing?					
I am better than most students in my class.		15	534	26	10
I am as good as most students in my class.		66	531	12	11
I am not as good as most students in my class.		19	525	2	31
How much TV do you watch on school nights?					
none		8	532	20	13
less than one hour		29	531	15	13
one to two hours		34	531	13	10
more than two hours		28	527	6	23

MAINE EDUCATIONAL ASSESSMENT

HEALTH EDUCATION RESULTS

School:
District:
Grade: 4
Date: DECEMBER 2002

PERFORMANCE LEVELS	STUDENTS AT EACH PERFORMANCE LEVEL					
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's body of work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in health education. The student demonstrates exemplary knowledge of content and skills related to health promotion and disease prevention including communication, decision making, analysis, and risk reduction (scaled scores: 561–580).	2000–2001					3
	2001–2002					2
	2002–2003					**2**
	Cumulative Average					2
Meets the Standards—The quality of a student's body of work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in health education. The student demonstrates consistent knowledge of content and skills related to health promotion and disease prevention including communication, decision making, analysis, and risk reduction (scaled scores: 541–560).	2000–2001					28
	2001–2002					30
	2002–2003					**31**
	Cumulative Average					30
Partially Meets the Standards—The quality of a student's body of work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in health education. The student demonstrates partial and/or inconsistent knowledge of content and skills related to health promotion and disease prevention including communication, decision making, analysis, and risk reduction (scaled scores: 521–540).	2000–2001					66
	2001–2002					66
	2002–2003					**65**
	Cumulative Average					66
Does Not Meet the Standards—The quality of a student's body of work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in health education. The student demonstrates a limited knowledge of content and skills related to health promotion and disease prevention including communication, decision making, analysis, and risk reduction (scaled scores: 501–520).	2000–2001					3
	2001–2002					1
	2002–2003					**1**
	Cumulative Average					2

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Health Concepts (Standard A)	**48**					28.9	60
Health Information, Services, and Products (Standard B)	**23**					14.2	62
Health Promotion and Risk Reduction (Standard C)	**32**					20.6	64
Influences on Health (Standard D)	**25**					13.5	54
Communication Skills (Standard E)	**27**					13.1	49
Decision Making and Goal Setting (Standard F)	**25**					13.4	54
Community, Consumer, and Environmental Health	**25**					12.9	52
Personal and Nutritional Health	**36**					21.7	60
Family Life Education and Growth and Development	**35**					20.3	58
Safety and Injury Prevention	**36**					22.0	61
Tobacco, Alcohol, and Other Drug Use Prevention	**30**					15.7	52
Prevention and Control of Disease and Disorders	**18**					10.9	61

MAINE EDUCATIONAL ASSESSMENT

HEALTH EDUCATION RESULTS
(CONTINUED)

School:
District:
Grade: 4
Date: DECEMBER 2002

Reporting Categories	School % Students in Each Category	School Scaled Score	School % Exceeds or Meets the Standards	School % Partially Meets the Standards	School % Does Not Meet the Standards	State % Students in Each Category	State Scaled Score	State % Exceeds or Meets the Standards	State % Partially Meets the Standards	State % Does Not Meet the Standards
Gender										
female						49	541	37	61	1
male						51	539	31	68	1
Ethnicity										
White (non-Hispanic)						93	540	35	64	1
Black (non-Hispanic)						1	535	16	81	3
Hispanic						1	538	29	67	4
Asian/Pacific Islander						1	538	24	73	3
American Indian/Alaskan native						1	537	21	75	4
multi-ethnic						2	539	32	67	1
not reported						1	539	29	69	2
Internet access at home										
yes						65	541	38	61	1
no						35	538	27	71	2
Title 1 program										
students currently served in reading						11	535	15	82	3
students previously served in reading						21	537	21	77	2
Migrant										
students eligible, not served						0	538	30	70	0
students eligible, served, not tutored						1	535	18	78	4
students eligible, served, tutored						1	535	16	79	6
Gifted/talented program										
yes						4	550	77	23	0
no						96	540	32	66	1
Identified disability										
yes						14	535	16	80	5
no						86	541	37	62	1
Language minority/LEP student										
bilingual never identified LEP						0	539	33	67	0
former LEP reclassified non-LEP						0	534	11	86	3
current LEP						1	536	21	75	5
First grade in district										
pre-k or kindergarten						69	540	35	63	1
first or second grade						15	540	34	64	2
third grade						8	539	29	70	1
fourth grade						8	538	27	71	2
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch. % Students in Each Category	State % Students in Each Category	State Scaled Score	State % Exceeds or Meets the Standards	State % Does Not Meet the Standards
How often do you have health education?					
almost every day		10	538	27	3
once or twice a week		30	541	36	1
once in a while		49	540	35	1
never		10	539	32	2
How much did you learn about nutrition this year?					
a lot		34	539	30	2
some		52	541	36	1
nothing		15	541	37	2
How much did you learn about staying safe and preventing accidents this year?					
a lot		42	540	32	2
some		48	541	37	1
nothing		10	539	31	2
How much did you learn about disease prevention this year?					
a lot		27	540	33	2
some		48	540	35	1
nothing		25	540	34	2
How well prepared do you feel you were to take the health test?					
very well prepared		30	540	35	2
prepared		45	541	38	1
not prepared at all		5	538	28	2
I don't know.		20	538	26	2
How do you feel about the following statement? "In school I learn most of what I need to know to answer the MEA health education questions."					
It is true about me.		51	541	37	1
It is not true about me.		11	541	37	1
I am not sure.		38	539	31	1
How much TV do you watch on school nights?					
none		8	542	41	1
less than one hour		29	541	36	1
one to two hours		34	541	38	1
more than two hours		28	538	25	2

Common Item Class Report

ELA WRITING

Grade 4

Code:
District:
School:
Class:
Date: December 2002
Group Size:

Name	Writing Prompt			Reading/Writing Extended-Response			Total Writing			Scaled Score	Performance Level
	Stylistic and Rhetorical Aspects (12 possible points)	Standard English Conventions (8 possible points)	Total (20 possible points)	Stylistic and Rhetorical Aspects (6 possible points)	Standard English Conventions (4 possible points)	Total (10 possible points)	Stylistic and Rhetorical Aspects (18 possible points)	Standard English Conventions (12 possible points)	Total (30 possible points)		
Percent Correct/Avg. Score: Class											
Percent Correct/Avg. Score: School											
Percent Correct/Avg. Score: District											
Percent Correct/Avg. Score: State	5.1	4.6	9.7	2.3	2.0	4.2	7.4	6.6			

Common Item Class Report

ELA READING

Grade 4

Code:
District:
School:
Class:
Date: December 2002
Group Size:

Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Points Earned (48 Max. Points)	Scaled Score	Performance Level
Content Standard and Performance Indicator	A3	D4	A1	D1	A3	D4	D3	D1	D3	A3	B9	B6	C6	C6	B9	A1	A1	A5	D3	D3	B9	A1	B9	B9	B9	A1	B9	A2	B9	B9			
Item Type	MC	MC	MC	MC	MC	MC	MC	MC	CR	CR	MC	MC	MC	MC	CR	MC	MC	MC	MC	CR	MC	MC	MC	MC	MC	MC	MC	MC	CR	CR			
Correct MC Response	C	B	D	B	C	A	A	B			C	A	C	C		D	A	B	B		C	D	A	D	C	D	B	B					
Name / Total Possible Points	1	1	1	1	1	1	1	1	4	4	1	1	1	1	4	1	1	1	1	4	1	1	1	1	1	1	1	1	4	4			

Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Percent Correct/Avg. Score: Class																														
Percent Correct/Avg. Score: School																														
Percent Correct/Avg. Score: District																														
Percent Correct/Avg. Score: State	56	71	70	39	86	64	64	53	1.9	1.8	86	89	83	80	1.7	56	73	42	73	1.3	85	88	89	85	95	93	64	96	1.8	2.2

Important Information for Parents/Guardians Grade 4 Assessment December 2002 Administration

STATE OF MAINE
DEPARTMENT OF EDUCATION
23 State House Station
Augusta, ME 04333
June 2003

Susan A. Gendron
COMMISSIONER

Dear Parents and Guardians:

In December 2002, students across the state participated in the Maine Educational Assessment (MEA) tests in English Language Arts—Reading and Writing; this is a report of these results. A second report will be sent to you in September 2003 with the results of the MEA assessments in mathematics, science and technology, and social studies. While the MEA has been administered to Maine students for the past 18 years, it is now designed to measure the progress of schools and students in achieving *Learning Results* expectations adopted by the Legislature in 1997. The MEA is aligned with the content standards described in Maine's *Learning Results,* which are available for your review at the following address: http://www.state.me.us/education/lres/homepage.htm.

The MEA results are reported in four performance levels that describe the quality of a student's responses on each of the content area tests. While many students do not yet meet the *Learning Results* standards, keep in mind that these are new challenging standards for student performance. Our long-term goal is for all students to meet the standards so that Maine youth will be among the best educated in the world.

To fairly assess student progress in achieving *Learning Results*, Maine has chosen to use multiple local measures along with the MEA to create a more complete picture of a student's achievement. The MEA, as one measure of student performance, should be viewed with local measures of achievement, such as portfolios of student work, performance exhibitions, and end-of-term grades. The staff at your school will be able to provide further information about your student's performance on the MEA as well as the school's performance. I encourage you to contact the school to begin a conversation that will support your child's success.

Sincerely,

Susan A. Gendron

Susan A. Gendron
Commissioner

Information on Maine's *Learning Results*

- The *Learning Results* were developed in eight content areas by thousands of Maine citizens.
- The MEA was rewritten by hundreds of Maine teachers to align with the *Learning Results.*
- Setting MEA performance standards based on the quality of student work was completed by hundreds of Maine teachers and citizens.
- For a copy of Maine's *Learning Results,* either call 624-6629 or find them on-line at http://www.state.me.us/education/lres/homepage.htm.

Performance Levels and Score Ranges

On this assessment, results are reported as four performance levels using scaled scores that range from 501 to 580. **The text below describes the quality of student work for each performance level.**

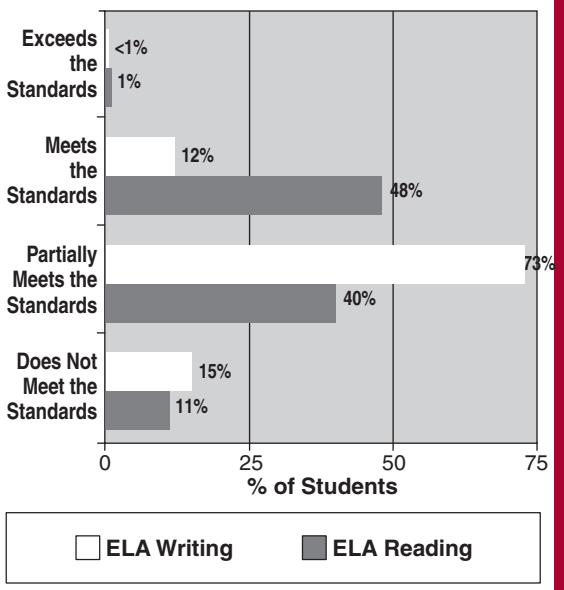
❒ **Exceeds the Standards (561 to 580)**
The student's work demonstrates exemplary accomplishment of content knowledge, analysis, problem-solving, and communication skills.

❒ **Meets the Standards (541 to 560)**
The student's work demonstrates consistent accomplishment of content knowledge, analysis, problem-solving, and communication skills.

❒ **Partially Meets the Standards (521 to 540)**
The student's work demonstrates inconsistent accomplishment of content knowledge, analysis, problem-solving, and communication skills.

❒ **Does Not Meet the Standards (501 to 520)**
The student's work demonstrates limited command of content knowledge, analysis, problem-solving, and communication skills.

Maine State MEA Summary Results December 2002 Administration



Student	Grade	School	District
	4		

Content Area	Performance Level	Score	This Student's Performance Levels and Scores
			Does Not Meet the Standards / Partially Meets the Standards / Meets the Standards / Exceeds the Standards
ELA* Writing			
ELA* Reading			

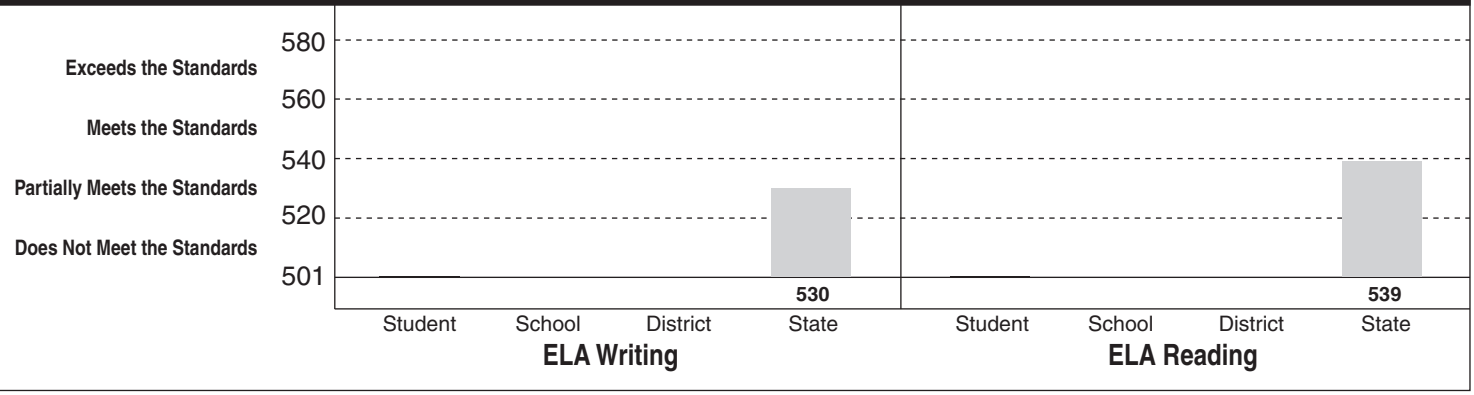
501 520 540 560 580

***ELA** is an abbreviation for English Language Arts
Testing Incomplete (TI): Student failed to attempt one or more sessions.

See reverse side for description of performance levels and state summary results.

The diamond (◆) represents the student's score. The bar (▬) surrounding the score represents the probable range of scores for the student if he or she were to be tested many times. This statistic is called the standard error of measurement.

How this Student's Performance Compared to Average Scores from School, District, and State



This Student's Performance in Content Area Subcategories

Content Areas	Content Area Subcategories	Student's Score Compared with Meeting the State Standards (Weaker / Meets the Standards / Stronger)
ELA Writing	Standard English Conventions (Standard F)	
	Stylistic and Rhetorical Aspects of Writing (Standard G)	
ELA Reading	Reading Process, Language, and Comprehension (Standards A, B, C, D)	

Definitions of Content Area Subcategories

Standard English Conventions: Refers to a student's ability to write correctly. Scoring focused on sentence structure, grammar and usage, and mechanics.

Stylistic and Rhetorical Aspects of Writing: Refers to a student's ability to use writing to explore ideas, to present lines of thought, to represent and reflect on human experience, and to communicate feelings, knowledge, and opinions. Scoring focused on topic development, organization, use of supportive details, and varied language and style.

Reading Process, Language, and Comprehension: Refers to a student's level of comprehension of literary reading selections (e.g., fiction, short stories, poetry) and informational reading selections (e.g., newspaper articles, informational essays, textbook passages), as well as a student's use of reading strategies, language, and analysis.

Name:
School:
District:
Performance Levels **Scaled Scores**

Grade: 4 **Writing:**
Date: 12/02 **Reading:**

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:
Performance Levels **Scaled Scores**

Grade: 4 **Writing:**
Date: 12/02 **Reading:**

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:
Performance Levels **Scaled Scores**

Grade: 4 **Writing:**
Date: 12/02 **Reading:**

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:
Performance Levels **Scaled Scores**

Grade: 4 **Writing:**
Date: 12/02 **Reading:**

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:
Performance Levels **Scaled Scores**

Grade: 4 **Writing:**
Date: 12/02 **Reading:**

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:
Performance Levels **Scaled Scores**

Grade: 4 **Writing:**
Date: 12/02 **Reading:**

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:
Performance Levels **Scaled Scores**

Grade: 4 **Writing:**
Date: 12/02 **Reading:**

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:
Performance Levels **Scaled Scores**

Grade: 4 **Writing:**
Date: 12/02 **Reading:**

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:
Performance Levels **Scaled Scores**

Grade: 4 **Writing:**
Date: 12/02 **Reading:**

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:
Performance Levels **Scaled Scores**

Grade: 4 **Writing:**
Date: 12/02 **Reading:**

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:
Performance Levels **Scaled Scores**

Grade: 4 **Writing:**
Date: 12/02 **Reading:**

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

DEPARTMENT OF EDUCATION

2002-2003 School Year Reports

Dear School Board Members and School Personnel:

The Maine Educational Assessment (MEA) is the state's measure of student progress in achieving the challenging academic expectations adopted in 1997 in the *Learning Results*. This report of student performance in reading, writing, and health education on the tests administered in December 2002 is the first of two summary reports you will be receiving for the 2002–2003 school year. The second set of reports available in September 2003 will include results in mathematics, science and technology, social studies, and visual and performing arts.

Beginning with the 2002–2003 school reports, the MEA is converting to an electronic format for distributing results. While the Parent Report continues to be produced on paper, all other reports are distributed through a series of three CDs including

- School and District Reports that provide comprehensive summaries of results;
- Common Item Reports that will, for the first time, include a file to enable local analysis of results;
- the return of student writing samples;
- back up copies of the Parent Report; and
- released test items, scoring guides, and student response samples.

It is hoped that this new electronic format will make the reports more easily available to teachers and the public through posting on school or district Web sites.

The 2002–2003 MEA reports complete the picture of benchmarks necessary for measuring student achievement of the *Learning Results* standards. Over the next few months we will complete a review of the MEA design and the performance standards set nearly five years ago with significant teacher and public input. With this information, any needed refinements to the program will be made, so that combined state and local assessment results will provide the comprehensive student performance data necessary to guide instruction and report on the status of our effort to the public.

I look forward to working with you in support of our continuing efforts to improve the quality and effectiveness of the instructional opportunities designed to help all students achieve high standards.

Sincerely,

Susan A. Gendron

Susan A. Gendron
Commissioner

Educational Assessment School Report

ID:

School:

District:

Grade: 8

Test Date: DECEMBER 2002

Contents of the Report

The report is divided into five main sections including a section describing the students tested and a separate section for the results in each content area.

Topic	*Page*
Summary of Scores	2
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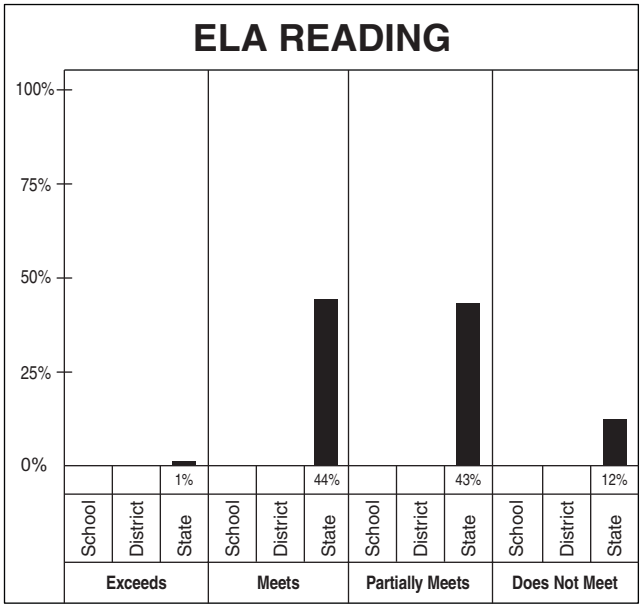
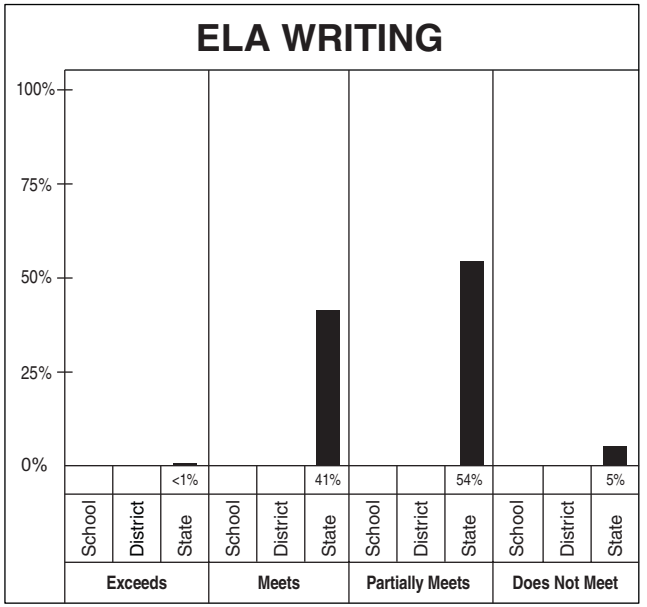
SUMMARY OF SCORES

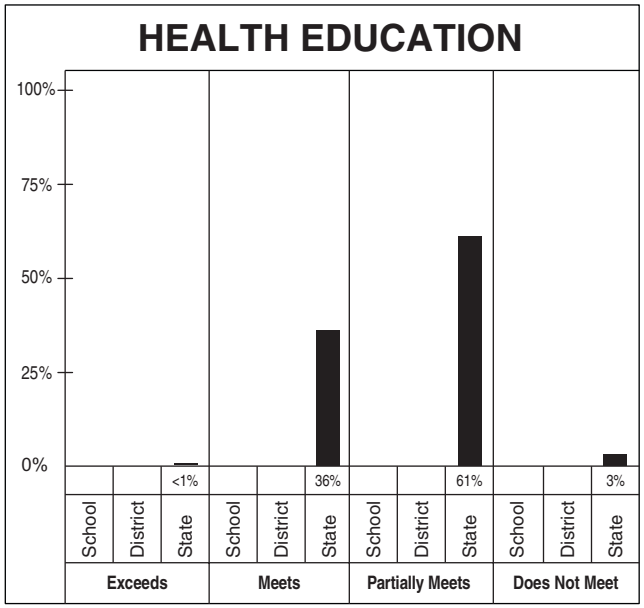
School:
District:
Grade: 8
Date: DECEMBER 2002

Executive Summary of School, District, and State Scores

Year	Average Performance Score		
	School	District	State
ELA READING			
2000–2001			
2001–2002			
2002–2003			
Cum. Avg.			
ELA WRITING			
2000–2001			
2001–2002			
2002–2003			
Cum. Avg.			
HEALTH EDUCATION			
2000–2001			
2001–2002			
2002–2003			
Cum. Avg.			







SUMMARY OF STUDENT PARTICIPATION

School:
District:
Grade: 8
Date: DECEMBER 2002

CONTENT AREA PARTICIPATION[2]

CATEGORY OF PARTICIPATION	Enrollment[1] on the first day of testing						ELA Reading						ELA Writing						Health Education						--					
	School		District		State		School		District		State		School		District		State		School		District		State		School		District		State	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Number of students					17439	100					17211	99					17252	99					17148	98						
Ethnicity					17439	100					17211	99					17252	99					17148	98						
White (non-Hispanic)					15899	91					15728	99					15767	99					15675	99						
Black (non-Hispanic)					205	1					202	99					201	98					193	94						
Hispanic					157	1					157	100					156	99					156	99						
Asian/Pacific Islander					170	1					168	99					168	99					168	99						
American Indian/Alaskan Native					243	1					240	99					241	99					242	100						
Multi-ethnic					516	3					514	100					514	100					513	99						
Not reported					249	1					202	81					205	82					201	81						
Identified disability					2525	14					2433	96					2447	97					2412	96						
Current LEP					118	1					115	97					114	97					103	87						
Internet access at home					17439	100					17211	99					17252	99					17148	98						
Yes					13873	80					13854	100					13862	100					13858	100						
No					3566	20					3357	94					3390	95					3290	92						

MODE OF PARTICIPATION[3]

	ELA Reading						ELA Writing						Health Education						--					
	School		District		State		School		District		State		School		District		State		School		District		State	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Students who took the assessment without accommodations					15026	87					14996	87					15092	88						
Students who took the assessment with accommodations					1992	12					2085	12					2056	12						
Identified disability (PET/IEP)					1834	92					1916	92					1905	93						
LEP					38	2					38	2					39	2						
504 plan					47	2					51	2					46	2						
Other					82	4					89	4					77	4						
Students recommended for participation in alternate assessment (PAAP)					193	1					171	1												
Identified disability (PET/IEP)					167	87					147	86												
LEP					19	10					19	11												
504 plan					1	1					0	0												
Other					7	4					6	4												

[1] Percents are the percentage of students enrolled in each participation category. [2] Percents are the percentage of students in the participation category who participated in the content area.
[3] Percents are the percentage of students in each content area who participated with each mode of participation.

MAINE EDUCATIONAL ASSESSMENT

ELA READING RESULTS

School:
District:
Grade: 8
Date: DECEMBER 2002

PERFORMANCE LEVELS	STUDENTS AT EACH PERFORMANCE LEVEL					
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in English language arts (reading). The work demonstrates exemplary accomplishment in the comprehension of literary and informational texts, in the use of the skills and strategies of reading to answer questions, and in the demonstration of understanding of how words and images communicate (scaled scores: 561–580).	2000–2001					1
	2001–2002					1
	2002–2003					**1**
	Cumulative Average					1
Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in English language arts (reading). The work demonstrates a consistent accomplishment in the comprehension of literary and informational texts, in the use of the skills and strategies of reading to answer questions, and in the demonstration of understanding of how words and images communicate (scaled scores: 541–560).	2000–2001					40
	2001–2002					42
	2002–2003					**44**
	Cumulative Average					42
Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in English language arts (reading). The work demonstrates inconsistent accomplishment in the comprehension of literary and informational texts, in the use of the skills and strategies of reading to answer questions, and in the demonstration of understanding of how words and images communicate (scaled scores: 521–540).	2000–2001					48
	2001–2002					44
	2002–2003					**43**
	Cumulative Average					45
Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in English language arts (reading). The student demonstrates limited accomplishment in the comprehension of literary and informational texts, in the use of the skills and strategies of reading to answer questions, and in the demonstration of understanding of how words and images communicate (scaled scores: 501–520).	2000–2001					11
	2001–2002					12
	2002–2003					**12**
	Cumulative Average					12

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Reading Process and Language (Standards A and C)	**56**					34.9	62
Reading Comprehension (Standards B and D)	**152**					88.9	58
Literature and Culture (Standard B)	**70**					38.7	55
Informational Texts (Standard D)	**82**					50.2	61

MAINE EDUCATIONAL ASSESSMENT

ELA READING RESULTS
(CONTINUED)

School:
District:
Grade: 8
Date: DECEMBER 2002

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						49	539	52	39	9
male						51	535	37	47	16
Ethnicity										
White (non-Hispanic)						92	537	45	43	12
Black (non-Hispanic)						1	531	26	47	27
Hispanic						1	536	41	48	11
Asian/Pacific Islander						1	537	45	41	13
American Indian/Alaskan native						1	528	21	49	30
multi-ethnic						3	536	39	47	14
not reported						1	533	29	52	19
Internet access at home										
yes						82	538	48	42	10
no						18	531	27	49	24
Title 1 program										
students currently served in reading						2	528	12	61	27
students previously served in reading						4	530	17	61	22
Migrant										
students eligible, not served						0	536	43	43	14
students eligible, served, not tutored						1	528	20	57	22
students eligible, served, tutored						1	531	25	54	21
Gifted/talented program										
yes						4	552	91	9	0
no						96	536	43	44	13
Identified disability										
yes						13	521	7	43	50
no						87	539	50	43	7
Language minority/LEP student										
bilingual never identified LEP						0	536	33	58	8
former LEP reclassified non-LEP						0	531	18	66	16
current LEP						1	529	18	53	29
First grade in district										
pre-k or kindergarten						59	538	48	42	10
grade 1, 2, 3, or 4						16	537	44	43	13
grade 5, 6, or 7						17	535	39	45	15
grade 8						7	533	31	48	21
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
How often are you asked to do research using information from one or more content areas?					
once a week		29	536	41	14
at least once a month		45	539	49	9
at least once a term		22	537	45	12
never		5	527	19	34
How many books have you read at home in the past two months?					
none		15	531	26	23
one		21	535	36	15
two to four		43	539	49	9
five or more		21	541	58	8
How often do you search for and read information on a computer?					
several times a week		45	539	50	10
once a week		26	538	46	11
at least once a month		21	536	41	13
never		8	529	22	28
How do you feel about the following statement? "My knowledge of reading will be useful to me as an adult."					
strongly agree		58	539	52	9
agree		36	535	37	15
disagree		4	529	23	29
strongly disagree		2	526	17	37
How good are you at reading?					
I am better than most students in my class.		34	543	66	5
I am as good as most students in my class.		54	536	38	12
I am not as good as most students in my class.		12	526	14	35
High school career pathway					
college prep		79	540	52	8
tech prep		12	530	22	23
occupational prep		6	527	19	31
apprenticeship programs		2	524	12	38
Parent education					
did not finish high school		5	527	16	33
graduated from high school		24	532	30	20
some education after high school		25	537	42	10
college and/or advanced degree		45	541	59	6

MAINE EDUCATIONAL ASSESSMENT

ELA WRITING RESULTS

School:
District:
Grade: 8
Date: DECEMBER 2002

PERFORMANCE LEVELS	STUDENTS AT EACH PERFORMANCE LEVEL					
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's written compositions at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in English language arts (writing). The student's work demonstrates exemplary accomplishment in both the development of the topic/idea and the use of Standard English conventions in first-draft writing (scaled scores: 561–580).	2000–2001					<1
	2001–2002					1
	2002–2003					**<1**
	Cumulative Average					<1
Meets the Standards—The quality of a student's written compositions at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in English language arts (writing). The student's work demonstrates proficiency in both the development of the topic/idea and the use of Standard English conventions in first-draft writing (scaled scores: 541–560).	2000–2001					39
	2001–2002					39
	2002–2003					**41**
	Cumulative Average					40
Partially Meets the Standards—The quality of a student's written compositions at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in English language arts (writing). The student's work demonstrates writing skills that may show moderate development of the topic/idea and/or some errors in Standard English conventions that may interfere with communication of ideas (scaled scores: 521–540).	2000–2001					50
	2001–2002					50
	2002–2003					**54**
	Cumulative Average					51
Does Not Meet the Standards—The quality of a student's written compositions at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in English language arts (writing). The student's work demonstrates writing skills that show limited development of the topic/idea and/or many errors in Standard English conventions that interfere with communication of ideas (scaled scores: 501–520).	2000–2001					10
	2001–2002					11
	2002–2003					**5**
	Cumulative Average					9

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Writing (Standards F and G)	**30**					15.6	52
Standard English Conventions (Standard F)	**12**					7.3	61
Stylistic and Rhetorical Aspects of Writing (Standard G)	**18**					8.4	47

MAINE EDUCATIONAL ASSESSMENT

ELA WRITING RESULTS
(CONTINUED)

School:
District:
Grade: 8
Date: DECEMBER 2002

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						49	540	52	46	2
male						51	535	30	63	7
Ethnicity										
White (non-Hispanic)						92	538	42	54	4
Black (non-Hispanic)						1	534	24	65	12
Hispanic						1	537	41	57	2
Asian/Pacific Islander						1	540	50	48	2
American Indian/Alaskan native						1	532	15	73	12
multi-ethnic						3	536	36	59	5
not reported						1	535	25	69	7
Internet access at home										
yes						82	538	44	52	3
no						18	534	25	65	10
Title 1 program										
students currently served in reading						2	533	17	78	4
students previously served in reading						4	534	22	73	5
Migrant										
students eligible, not served						0	536	46	47	7
students eligible, served, not tutored						1	533	16	76	8
students eligible, served, tutored						1	535	24	69	7
Gifted/talented program										
yes						4	547	85	15	0
no						96	537	39	56	5
Identified disability										
yes						13	527	6	70	23
no						87	539	46	52	2
Language minority/LEP student										
bilingual never identified LEP						0	538	39	61	0
former LEP reclassified non-LEP						0	536	31	64	6
current LEP						1	535	33	56	11
First grade in district										
pre-k or kindergarten						60	538	44	52	3
grade 1, 2, 3, or 4						16	537	40	56	5
grade 5, 6, or 7						17	536	35	58	6
grade 8						7	535	30	61	9
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
How much in-school time do you spend writing each week?					
less than 45 minutes		17	535	33	7
about an hour		29	538	41	4
1 1/2 to 2 hours		31	539	46	3
2 1/2 hours or more		22	537	40	5
How do you use a computer for writing?					
not at all		6	531	17	14
drafts only		1	531	18	14
drafts and final copy		48	538	45	4
final copy only		45	537	40	4
Do you or your teacher keep a collection of your writing?					
A collection of my writing is not kept.		15	534	26	8
A collection of my writing is kept, but I don't use it.		52	538	41	4
A collection of my writing is kept and I use it to grow as a writer.		33	539	48	3
How do you most often receive grammar instruction?					
individually, during writing conferences		8	534	27	10
by written comments on my papers		33	537	40	4
in mini-lessons during English class		52	538	45	3
in a separate class based on a grammar textbook		6	536	38	8
How good are you at writing?					
I am better than most students in my class.		23	543	65	2
I am as good as most students in my class.		63	537	39	3
I am not as good as most students in my class.		14	530	12	14
How do you feel about the following statement? "My ability to write will be useful to me as an adult."					
strongly agree		34	539	50	3
agree		53	537	39	4
disagree		10	535	30	6
strongly disagree		3	532	20	14
High school career pathway					
college prep		80	539	48	2
tech prep		12	532	19	10
occupational prep		6	531	16	15
apprenticeship programs		2	530	14	16
Parent education					
did not finish high school		5	532	19	11
graduated from high school		24	535	29	8
some education after high school		25	537	38	4
college and/or advanced degree		45	540	53	2

MAINE EDUCATIONAL ASSESSMENT

HEALTH EDUCATION RESULTS

School:
District:
Grade: 8
Date: DECEMBER 2002

PERFORMANCE LEVELS	STUDENTS AT EACH PERFORMANCE LEVEL					
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's body of work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in health education. The student demonstrates exemplary knowledge of content and skills related to health promotion and disease prevention including communication, decision making, analysis, and risk reduction (scaled scores: 561–580).	2000–2001					1
	2001–2002					<1
	2002–2003					**<1**
	Cumulative Average					<1
Meets the Standards—The quality of a student's body of work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in health education. The student demonstrates consistent knowledge of content and skills related to health promotion and disease prevention including communication, decision making, analysis, and risk reduction (scaled scores: 541–560).	2000–2001					37
	2001–2002					36
	2002–2003					**36**
	Cumulative Average					36
Partially Meets the Standards—The quality of a student's body of work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in health education. The student demonstrates partial and/or inconsistent knowledge of content and skills related to health promotion and disease prevention including communication, decision making, analysis, and risk reduction (scaled scores: 521–540).	2000–2001					60
	2001–2002					61
	2002–2003					**61**
	Cumulative Average					61
Does Not Meet the Standards—The quality of a student's body of work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in health education. The student demonstrates a limited knowledge of content and skills related to health promotion and disease prevention including communication, decision making, analysis, and risk reduction (scaled scores: 501–520).	2000–2001					3
	2001–2002					2
	2002–2003					**3**
	Cumulative Average					3

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Health Concepts (Standard A)	**58**					38.0	66
Health Information, Services, and Products (Standard B)	**25**					12.8	51
Health Promotion and Risk Reduction (Standard C)	**24**					14.5	60
Influences on Health (Standard D)	**24**					11.9	50
Communication Skills (Standard E)	**25**					13.1	52
Decision Making and Goal Setting (Standard F)	**24**					12.0	50
Community, Consumer, and Environmental Health	**34**					16.8	49
Personal and Nutritional Health	**32**					18.3	57
Family Life Education and Growth and Development	**36**					20.1	56
Safety and Injury Prevention	**28**					16.9	60
Tobacco, Alcohol, and Other Drug Use Prevention	**32**					20.6	64
Prevention and Control of Disease and Disorders	**18**					9.7	54

MAINE EDUCATIONAL ASSESSMENT

HEALTH EDUCATION RESULTS
(CONTINUED)

School:
District:
Grade: 8
Date: DECEMBER 2002

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						49	540	42	56	2
male						51	538	31	66	3
Ethnicity										
White (non-Hispanic)						92	539	37	61	2
Black (non-Hispanic)						1	535	20	71	9
Hispanic						1	538	37	61	3
Asian/Pacific Islander						1	538	30	65	5
American Indian/Alaskan native						1	535	16	79	4
multi-ethnic						3	539	33	66	1
not reported						1	535	24	70	6
Internet access at home										
yes						82	540	39	59	2
no						18	536	24	71	5
Title 1 program										
students currently served in reading						2	534	15	82	4
students previously served in reading						4	535	17	78	4
Migrant										
students eligible, not served						0	536	25	73	2
students eligible, served, not tutored						1	534	14	79	6
students eligible, served, tutored						1	536	24	67	9
Gifted/talented program										
yes						4	547	74	26	0
no						96	539	34	63	3
Identified disability										
yes						13	532	9	80	11
no						87	540	40	59	1
Language minority/LEP student										
bilingual never identified LEP						0	536	21	71	7
former LEP reclassified non-LEP						0	534	16	68	16
current LEP						1	533	19	69	12
First grade in district										
pre-k or kindergarten						59	540	39	59	2
grade 1, 2, 3, or 4						16	539	36	62	3
grade 5, 6, or 7						17	538	31	66	3
grade 8						7	537	29	67	4
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
Which of the seventh- and eighth-grade health education classes have you found most useful?					
growth and development and personal hygiene		28	538	33	3
mental health		17	539	38	3
nutrition		18	539	39	3
substance abuse prevention		36	539	36	2
How much did you learn about health education and media messages in your seventh- and eighth-grade health classes?					
a lot		30	540	42	2
some		60	539	35	3
nothing		10	537	27	3
How much did you learn about the effects of behavior on health in your seventh- and eighth-grade health classes?					
a lot		37	540	39	2
some		53	539	35	2
nothing		10	537	30	4
How much did you learn about injury prevention and response strategies for personal safety and/or conflict resolution strategies in your seventh- and eighth-grade health classes?					
a lot		32	540	39	2
some		56	539	35	2
nothing		12	539	36	4
How much did you learn about the influence of school, family, and peers on the health of adolescents and/or personal health goals in your seventh- and eighth-grade health classes?					
a lot		41	540	41	2
some		51	538	34	3
nothing		9	538	31	4
How do you feel about the following? "My knowledge of health education will be useful to me as an adult."					
strongly agree		39	539	37	2
agree		52	539	36	2
disagree		7	538	31	4
strongly disagree		2	535	20	11
High school career pathway					
college prep		79	540	41	2
tech prep		12	536	20	4
occupational prep		7	534	17	6
apprenticeship programs		2	533	13	10
Parent education					
did not finish high school		5	534	14	7
graduated from high school		24	536	25	4
some education after high school		25	539	34	2
college and/or advanced degree		45	541	47	1

Common Item Class Report

ELA WRITING

Grade 8

Code:
District:
School:
Class:
Date: December 2002
Group Size:

Name	Writing Prompt			Reading/Writing Extended-Response			Total Writing			Scaled Score	Performance Level
	Stylistic and Rhetorical Aspects (12 possible points)	Standard English Conventions (8 possible points)	Total (20 possible points)	Stylistic and Rhetorical Aspects (6 possible points)	Standard English Conventions (4 possible points)	Total (10 possible points)	Stylistic and Rhetorical Aspects (18 possible points)	Standard English Conventions (12 possible points)	Total (30 possible points)		
Percent Correct/Avg. Score: Class											
Percent Correct/Avg. Score: School											
Percent Correct/Avg. Score: District											
Percent Correct/Avg. Score: State	6.0	5.1	11.1	2.4	2.2	4.6	8.4	7.3			

Common Item Class Report

ELA READING

Grade 8

Code:
District:
School:
Class:
Date: December 2002
Group Size:

Name	Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Points Earned (48 Max. Points)	Scaled Score	Performance Level
	Content Standard and Performance Indicator	B6	A7	B9	A5	B9	B9	B9	B13	B9	B11	A3	C1	A7	A6	A2	B7	C1	B8	B8	B10	C1	D7	D7	D8	D6	D8	C1	D5	D6	D5			
	Item Type	MC	MC	MC	MC	MC	MC	MC	MC	CR	CR	MC	MC	MC	MC	CR	MC	MC	MC	MC	CR	MC	MC	MC	MC	MC	MC	MC	MC	CR	CR			
	Correct MC Response	C	B	B	A	A	D	C	D			B	A	C	D		C	A	D	B		C	A	B	B	D	C	A	D					
	Total Possible Points	1	1	1	1	1	1	1	1	4	4	1	1	1	1	4	1	1	1	1	4	1	1	1	1	1	1	1	1	4	4			

Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Percent Correct/Avg. Score: Class																														
Percent Correct/Avg. Score: School																														
Percent Correct/Avg. Score: District																														
Percent Correct/Avg. Score: State	61	67	87	76	67	84	73	83	1.9	1.9	68	59	73	52	1.8	49	83	82	83	2.2	78	83	87	65	84	77	83	64	2.2	2.0

Important Information for Parents/Guardians Grade 8 Assessment December 2002 Administration

STATE OF MAINE
DEPARTMENT OF EDUCATION
23 State House Station
Augusta, ME 04333
June 2003

Susan A. Gendron
COMMISSIONER

Dear Parents and Guardians:

In December 2002, students across the state participated in the Maine Educational Assessment (MEA) tests in English Language Arts—Reading and Writing; this is a report of these results. A second report will be sent to you in September 2003 with the results of the MEA assessments in mathematics, science and technology, and social studies. While the MEA has been administered to Maine students for the past 18 years, it is now designed to measure the progress of schools and students in achieving *Learning Results* expectations adopted by the Legislature in 1997. The MEA is aligned with the content standards described in Maine's *Learning Results,* which are available for your review at the following address: http://www.state.me.us/education/lres/homepage.htm.

The MEA results are reported in four performance levels that describe the quality of a student's responses on each of the content area tests. While many students do not yet meet the *Learning Results* standards, keep in mind that these are new challenging standards for student performance. Our long-term goal is for all students to meet the standards so that Maine youth will be among the best educated in the world.

To fairly assess student progress in achieving *Learning Results*, Maine has chosen to use multiple local measures along with the MEA to create a more complete picture of a student's achievement. The MEA, as one measure of student performance, should be viewed with local measures of achievement, such as portfolios of student work, performance exhibitions, and end-of-term grades. The staff at your school will be able to provide further information about your student's performance on the MEA as well as the school's performance. I encourage you to contact the school to begin a conversation that will support your child's success.

Sincerely,

Susan A. Gendron

Susan A. Gendron
Commissioner

Information on Maine's *Learning Results*

- The *Learning Results* were developed in eight content areas by thousands of Maine citizens.
- The MEA was rewritten by hundreds of Maine teachers to align with the *Learning Results.*
- Setting MEA performance standards based on the quality of student work was completed by hundreds of Maine teachers and citizens.
- For a copy of Maine's *Learning Results,* either call 624-6629 or find them on-line at http://www.state.me.us/education/lres/homepage.htm.

Performance Levels and Score Ranges

On this assessment, results are reported as four performance levels using scaled scores that range from 501 to 580. **The text below describes the quality of student work for each performance level.**

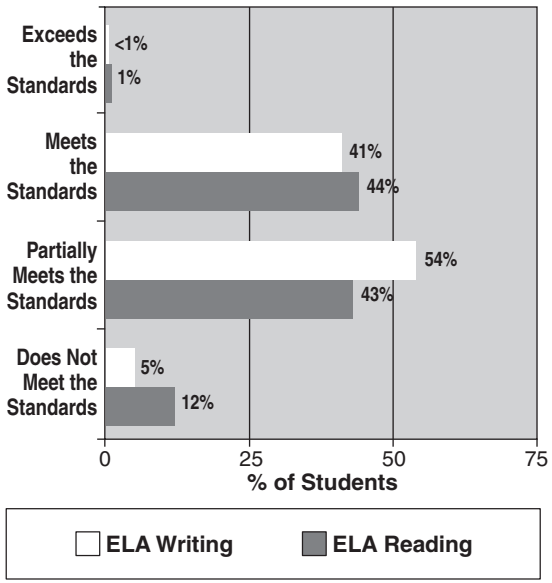
❒ **Exceeds the Standards (561 to 580)**
The student's work demonstrates exemplary accomplishment of content knowledge, analysis, problem-solving, and communication skills.

❒ **Meets the Standards (541 to 560)**
The student's work demonstrates consistent accomplishment of content knowledge, analysis, problem-solving, and communication skills.

❒ **Partially Meets the Standards (521 to 540)**
The student's work demonstrates inconsistent accomplishment of content knowledge, analysis, problem-solving, and communication skills.

❒ **Does Not Meet the Standards (501 to 520)**
The student's work demonstrates limited command of content knowledge, analysis, problem-solving, and communication skills.

Maine State MEA Summary Results December 2002 Administration



Student	Grade	School	District
	8		

Content Area	Performance Level	Score	This Student's Performance Levels and Scores
			Does Not Meet the Standards / Partially Meets the Standards / Meets the Standards / Exceeds the Standards
ELA* Writing			
ELA* Reading			

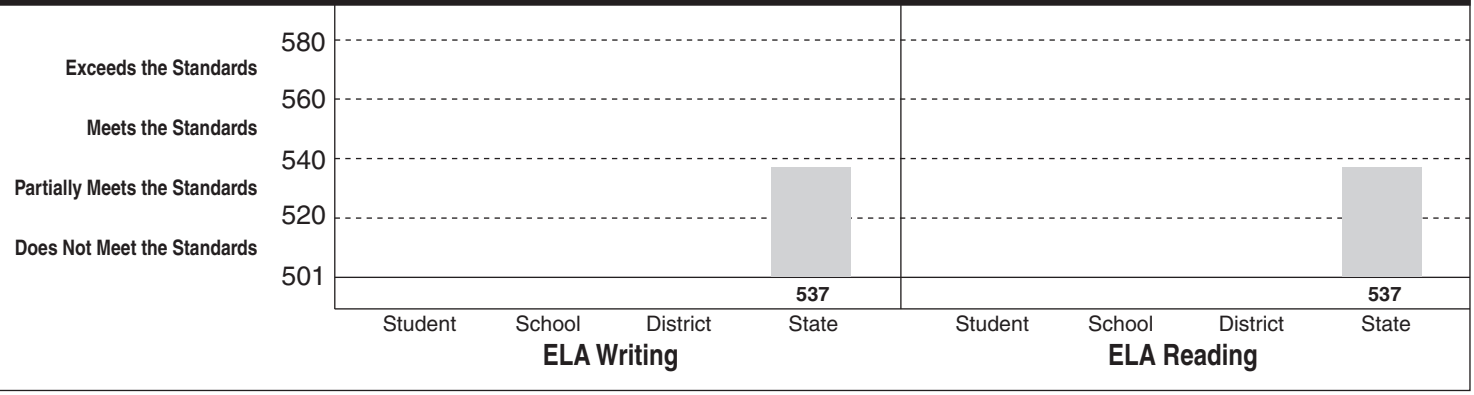
501 520 540 560 580

***ELA** is an abbreviation for English Language Arts
Testing Incomplete (TI): Student failed to attempt one or more sessions.

See reverse side for description of performance levels and state summary results.

The diamond (◆) represents the student's score. The bar (▬) surrounding the score represents the probable range of scores for the student if he or she were to be tested many times. This statistic is called the standard error of measurement.

How this Student's Performance Compared to Average Scores from School, District, and State



This Student's Performance in Content Area Subcategories

Content Areas	Content Area Subcategories	Student's Score Compared with Meeting the State Standards (Weaker / Meets the Standards / Stronger)
ELA Writing	Standard English Conventions (Standard F)	
	Stylistic and Rhetorical Aspects of Writing (Standard G)	
ELA Reading	Reading Process, Language, and Comprehension (Standards A, B, C, D)	

Definitions of Content Area Subcategories

Standard English Conventions: Refers to a student's ability to write correctly. Scoring focused on sentence structure, grammar and usage, and mechanics.

Stylistic and Rhetorical Aspects of Writing: Refers to a student's ability to use writing to explore ideas, to present lines of thought, to represent and reflect on human experience, and to communicate feelings, knowledge, and opinions. Scoring focused on topic development, organization, use of supportive details, and varied language and style.

Reading Process, Language, and Comprehension: Refers to a student's level of comprehension of literary reading selections (e.g., fiction, short stories, poetry) and informational reading selections (e.g., newspaper articles, informational essays, textbook passages), as well as a student's use of reading strategies, language, and analysis.

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 **Writing:**
Date: 12/02 **Reading:**

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

DEPARTMENT OF EDUCATION

2002-2003 School Year Reports

Dear School Board Members and School Personnel:

The Maine Educational Assessment (MEA) is the state's measure of student progress in achieving the challenging academic expectations adopted in 1997 in the *Learning Results*. This report of student performance in reading, writing, and health education on the tests administered in December 2002 is the first of two summary reports you will be receiving for the 2002–2003 school year. The second set of reports available in September 2003 will include results in mathematics, science and technology, social studies, and visual and performing arts.

Beginning with the 2002–2003 school reports, the MEA is converting to an electronic format for distributing results. While the Parent Report continues to be produced on paper, all other reports are distributed through a series of three CDs including

- School and District Reports that provide comprehensive summaries of results;
- Common Item Reports that will, for the first time, include a file to enable local analysis of results;
- the return of student writing samples;
- back up copies of the Parent Report; and
- released test items, scoring guides, and student response samples.

It is hoped that this new electronic format will make the reports more easily available to teachers and the public through posting on school or district Web sites.

The 2002–2003 MEA reports complete the picture of benchmarks necessary for measuring student achievement of the *Learning Results* standards. Over the next few months we will complete a review of the MEA design and the performance standards set nearly five years ago with significant teacher and public input. With this information, any needed refinements to the program will be made, so that combined state and local assessment results will provide the comprehensive student performance data necessary to guide instruction and report on the status of our effort to the public.

I look forward to working with you in support of our continuing efforts to improve the quality and effectiveness of the instructional opportunities designed to help all students achieve high standards.

Sincerely,

Susan A. Gendron

Susan A. Gendron
Commissioner

Educational Assessment School Report

ID:

School:

District:

Grade: 11

Test Date: DECEMBER 2002

Contents of the Report

The report is divided into five main sections including a section describing the students tested and a separate section for the results in each content area.

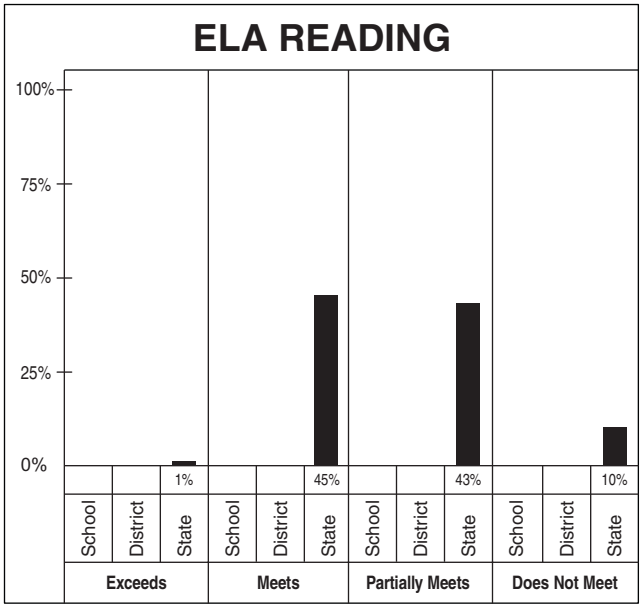
Topic	*Page*
Summary of Scores	2
Summary of Student Participation	3
English Language Arts Reading Results	4-5
English Language Arts Writing Results	6-7
Health Education Results	8-9

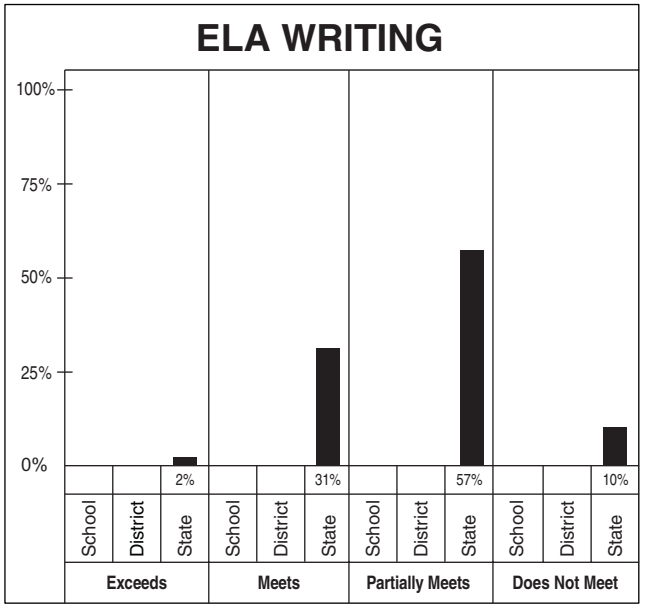
SUMMARY OF SCORES

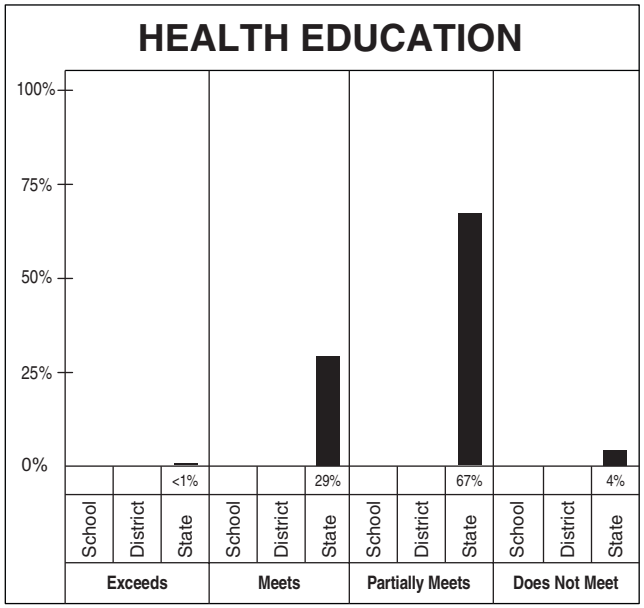
School:
District:
Grade: 11
Date: DECEMBER 2002

Executive Summary of School, District, and State Scores

Year	Average Performance Score		
	School	District	State
ELA READING			
2000–2001			
2001–2002			
2002–2003			
Cum. Avg.			
ELA WRITING			
2000–2001			
2001–2002			
2002–2003			
Cum. Avg.			
HEALTH EDUCATION			
2000–2001			
2001–2002			
2002–2003			
Cum. Avg.			







SUMMARY OF STUDENT PARTICIPATION

School:
District:
Grade: 11
Date: DECEMBER 2002

CONTENT AREA PARTICIPATION[2]

CATEGORY OF PARTICIPATION	Enrollment[1] on the first day of testing						ELA Reading						ELA Writing						Health Education						--					
	School		District		State		School		District		State		School		District		State		School		District		State		School		District		State	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Number of students					16203	100					15742	97					15798	98					15761	97						
Ethnicity					16203	100					15742	97					15798	98					15761	97						
White (non-Hispanic)					14810	91					14541	98					14580	98					14565	98						
Black (non-Hispanic)					177	1					173	98					176	99					175	99						
Hispanic					135	1					129	96					131	97					129	96						
Asian/Pacific Islander					164	1					161	98					163	99					161	98						
American Indian/Alaskan Native					151	1					142	94					148	98					142	94						
Multi-ethnic					327	2					325	99					327	100					324	99						
Not reported					439	3					271	62					273	62					265	60						
Identified disability					1702	11					1636	96					1643	97					1625	95						
Current LEP					120	1					119	99					119	99					119	99						
Internet access at home					16203	100					15742	97					15798	98					15761	97						
Yes					13038	80					12986	100					12992	100					13029	100						
No					3165	20					2756	87					2806	89					2732	86						

MODE OF PARTICIPATION[3]	ELA Reading						ELA Writing						Health Education						--					
	School		District		State		School		District		State		School		District		State		School		District		State	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Students who took the assessment without accommodations					14411	92					14400	91					14550	92						
Students who took the assessment with accommodations					1213	8					1286	8					1211	8						
Identified disability (PET/IEP)					1160	96					1223	95					1163	96						
LEP					19	2					20	2					14	1						
504 plan					24	2					31	2					25	2						
Other					14	1					16	1					13	1						
Students recommended for participation in alternate assessment (PAAP)					118	1					112	1												
Identified disability (PET/IEP)					93	79					86	77												
LEP					3	3					3	3												
504 plan					0	0					0	0												
Other					22	19					23	21												

[1] Percents are the percentage of students enrolled in each participation category. [2] Percents are the percentage of students in the participation category who participated in the content area.
[3] Percents are the percentage of students in each content area who participated with each mode of participation.

MAINE EDUCATIONAL ASSESSMENT

ELA READING RESULTS

School:
District:
Grade: 11
Date: DECEMBER 2002

PERFORMANCE LEVELS		STUDENTS AT EACH PERFORMANCE LEVEL				
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in English language arts (reading). The work demonstrates exemplary accomplishment in the comprehension of literary and informational texts, in the use of the skills and strategies of reading to answer questions, and in the demonstration of understanding of how words and images communicate (scaled scores: 561–580).	2000–2001					2
	2001–2002					2
	2002–2003					**1**
	Cumulative Average					2
Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in English language arts (reading). The work demonstrates a consistent accomplishment in the comprehension of literary and informational texts, in the use of the skills and strategies of reading to answer questions, and in the demonstration of understanding of how words and images communicate (scaled scores: 541–560).	2000–2001					50
	2001–2002					51
	2002–2003					**45**
	Cumulative Average					49
Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in English language arts (reading). The work demonstrates inconsistent accomplishment in the comprehension of literary and informational texts, in the use of the skills and strategies of reading to answer questions, and in the demonstration of understanding of how words and images communicate (scaled scores: 521–540).	2000–2001					43
	2001–2002					39
	2002–2003					**43**
	Cumulative Average					42
Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in English language arts (reading). The student demonstrates limited accomplishment in the comprehension of literary and informational texts, in the use of the skills and strategies of reading to answer questions, and in the demonstration of understanding of how words and images communicate (scaled scores: 501–520).	2000–2001					6
	2001–2002					8
	2002–2003					**10**
	Cumulative Average					8

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Reading Process and Language (Standards A and C)	**38**					25.6	67
Reading Comprehension (Standards B and D)	**170**					98.8	58
Literature and Culture (Standard B)	**78**					45.3	58
Informational Texts (Standard D)	**92**					53.5	58

MAINE EDUCATIONAL ASSESSMENT

ELA READING RESULTS
(CONTINUED)

School:
District:
Grade: 11
Date: DECEMBER 2002

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						49	542	55	39	6
male						51	536	39	47	14
Ethnicity										
White (non-Hispanic)						94	539	47	43	10
Black (non-Hispanic)						1	531	22	53	26
Hispanic						1	533	29	53	18
Asian/Pacific Islander						1	541	54	38	8
American Indian/Alaskan native						1	531	19	59	22
multi-ethnic						2	539	50	40	10
not reported						1	536	39	43	19
Internet access at home										
yes						85	540	51	41	8
no						15	532	25	53	23
Migrant										
students eligible, not served						0	531	18	63	20
students eligible, served, not tutored						0	532	21	58	21
students eligible, served, tutored						0	530	16	66	19
Gifted/talented program										
yes						2	552	90	9	1
no						98	539	46	44	11
Identified disability										
yes						10	522	5	45	49
no						90	541	51	43	6
Language minority/LEP student										
bilingual never identified LEP						0	534	50	36	14
former LEP reclassified non-LEP						0	538	47	47	7
current LEP						0	528	12	62	27
First grade in district										
before grade 9						76	540	49	42	9
grade 9						13	538	44	45	11
grade 10						4	537	42	46	13
grade 11						7	534	34	47	19
College prep										
yes						73	543	59	36	5
no						27	530	16	62	22
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
How often are you asked to do research using information from one or more content areas?					
once a week		24	539	46	10
at least once a month		46	540	51	7
at least once a term		26	539	45	10
never		4	527	15	38
How many books have you read at home in the past two months?					
none		27	534	31	17
one		28	539	45	9
two to four		35	542	57	6
five or more		10	543	61	7
How often do you search for and read information on a computer?					
several times a week		56	541	53	6
once a week		23	539	46	11
at least once a month		15	536	37	15
never		5	527	16	32
How do you feel about the following statement? "My knowledge of reading will be useful to me as an adult."					
strongly agree		61	542	55	6
agree		35	536	36	13
disagree		3	530	24	28
strongly disagree		1	526	16	41
How good are you at reading?					
I am better than most students in my class.		38	544	65	4
I am as good as most students in my class.		52	538	41	9
I am not as good as most students in my class.		10	528	15	32
High school career pathway					
college prep		74	543	59	4
tech prep		18	530	15	22
occupational prep		6	527	14	33
apprenticeship programs		1	526	13	44
Hours worked at part-time job during school week					
do not work part-time during school week		52	540	51	9
8 hours or fewer		19	540	51	8
9-21 hours		27	537	39	11
more than 21 hours		3	530	22	26
Parent education					
did not finish high school		4	529	16	29
graduated from high school		25	535	32	16
some education after high school		27	538	43	9
college and/or advanced degree		44	543	62	5

MAINE EDUCATIONAL ASSESSMENT

ELA WRITING RESULTS

School:
District:
Grade: 11
Date: DECEMBER 2002

PERFORMANCE LEVELS	STUDENTS AT EACH PERFORMANCE LEVEL					
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's written compositions at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in English language arts (writing). The student's work demonstrates exemplary accomplishment in both the development of the topic/idea and the use of Standard English conventions in first-draft writing (scaled scores: 561–580).	2000–2001					1
	2001–2002					4
	2002–2003					**2**
	Cumulative Average					2
Meets the Standards—The quality of a student's written compositions at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in English language arts (writing). The student's work demonstrates proficiency in both the development of the topic/idea and the use of Standard English conventions in first-draft writing (scaled scores: 541–560).	2000–2001					40
	2001–2002					33
	2002–2003					**31**
	Cumulative Average					35
Partially Meets the Standards—The quality of a student's written compositions at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in English language arts (writing). The student's work demonstrates writing skills that may show moderate development of the topic/idea and/or some errors in Standard English conventions that may interfere with communication of ideas (scaled scores: 521–540).	2000–2001					50
	2001–2002					48
	2002–2003					**57**
	Cumulative Average					52
Does Not Meet the Standards—The quality of a student's written compositions at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in English language arts (writing). The student's work demonstrates writing skills that show limited development of the topic/idea and/or many errors in Standard English conventions that interfere with communication of ideas (scaled scores: 501–520).	2000–2001					9
	2001–2002					14
	2002–2003					**10**
	Cumulative Average					11

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Writing (Standards F and G)	**30**					17.1	57
Standard English Conventions (Standard F)	**12**					8.0	67
Stylistic and Rhetorical Aspects of Writing (Standard G)	**18**					9.1	51

MAINE EDUCATIONAL ASSESSMENT

ELA WRITING RESULTS
(CONTINUED)

School:
District:
Grade: 11
Date: DECEMBER 2002

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						50	540	41	54	5
male						50	534	25	60	15
Ethnicity										
White (non-Hispanic)						94	537	33	57	10
Black (non-Hispanic)						1	530	13	63	24
Hispanic						1	533	19	67	15
Asian/Pacific Islander						1	540	43	51	6
American Indian/Alaskan native						1	530	9	73	18
multi-ethnic						2	537	37	51	12
not reported						1	534	28	52	20
Internet access at home										
yes						85	538	36	56	8
no						15	531	16	62	22
Migrant										
students eligible, not served						0	530	8	68	25
students eligible, served, not tutored						0	532	16	67	18
students eligible, served, tutored						0	529	12	68	21
Gifted/talented program										
yes						2	548	74	24	2
no						98	537	32	58	10
Identified disability										
yes						9	524	4	51	46
no						91	538	36	57	7
Language minority/LEP student										
bilingual never identified LEP						0	536	31	62	8
former LEP reclassified non-LEP						0	533	25	50	25
current LEP						0	532	16	65	18
First grade in district										
before grade 9						76	537	35	56	9
grade 9						13	536	30	59	11
grade 10						4	536	28	60	12
grade 11						7	533	22	60	18
College prep										
yes						74	540	42	53	5
no						26	529	10	67	23
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
How much in-school time do you spend writing each week?					
less than 45 minutes		20	535	30	14
about an hour		28	537	33	9
1 1/2 to 2 hours		30	538	37	7
2 1/2 hours or more		23	537	32	11
How do you use a computer for writing?					
not at all		4	525	6	42
drafts only		1	526	6	38
drafts and final copy		58	539	41	6
final copy only		38	535	26	11
Do you or your teacher keep a collection of your writing?					
A collection of my writing is not kept.		20	533	21	16
A collection of my writing is kept, but I don't use it.		54	537	33	9
A collection of my writing is kept and I use it to grow as a writer.		27	539	42	7
How do you most often receive grammar instruction?					
individually, during writing conferences		6	533	23	22
by written comments on my papers		51	538	36	8
in mini-lessons during English class		41	537	32	10
in a separate class based on a grammar textbook		2	532	20	22
How good are you at writing?					
I am better than the average student in my classes.		31	543	55	4
I am as good as the average student in my classes.		57	536	27	8
I am not as good as the average student in my classes.		12	527	7	33
How do you feel about the following statement? "My ability to write will be useful to me as an adult."					
strongly agree		40	541	45	6
agree		48	536	28	10
disagree		10	531	16	20
strongly disagree		3	528	8	32
High school career pathway					
college prep		75	540	43	4
tech prep		18	529	8	22
occupational prep		6	527	7	34
apprenticeship programs		1	527	11	38
Hours worked at part-time job during school week					
do not work part-time during school week		52	538	37	10
8 hours or fewer		19	538	37	8
9-21 hours		26	535	26	11
more than 21 hours		3	530	14	24
Parent education					
did not finish high school		4	529	10	27
graduated from high school		25	533	21	15
some education after high school		27	536	30	9
college and/or advanced degree		44	540	45	5

MAINE EDUCATIONAL ASSESSMENT

HEALTH EDUCATION RESULTS

School:
District:
Grade: 11
Date: DECEMBER 2002

PERFORMANCE LEVELS	STUDENTS AT EACH PERFORMANCE LEVEL					
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's body of work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in health education. The student demonstrates exemplary knowledge of content and skills related to health promotion and disease prevention including communication, decision making, analysis, and risk reduction (scaled scores: 561–580).	2000–2001					1
	2001–2002					<1
	2002–2003					**<1**
	Cumulative Average					<1
Meets the Standards—The quality of a student's body of work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in health education. The student demonstrates consistent knowledge of content and skills related to health promotion and disease prevention including communication, decision making, analysis, and risk reduction (scaled scores: 541–560).	2000–2001					30
	2001–2002					31
	2002–2003					**29**
	Cumulative Average					30
Partially Meets the Standards—The quality of a student's body of work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in health education. The student demonstrates partial and/or inconsistent knowledge of content and skills related to health promotion and disease prevention including communication, decision making, analysis, and risk reduction (scaled scores: 521–540).	2000–2001					65
	2001–2002					65
	2002–2003					**67**
	Cumulative Average					66
Does Not Meet the Standards—The quality of a student's body of work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in health education. The student demonstrates a limited knowledge of content and skills related to health promotion and disease prevention including communication, decision making, analysis, and risk reduction (scaled scores: 501–520).	2000–2001					4
	2001–2002					3
	2002–2003					**4**
	Cumulative Average					4

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Health Concepts (Standard A)	**67**					42.7	64
Health Information, Services, and Products (Standard B)	**18**					10.8	60
Health Promotion and Risk Reduction (Standard C)	**22**					14.7	67
Influences on Health (Standard D)	**23**					13.3	58
Communication Skills (Standard E)	**28**					14.8	53
Decision Making and Goal Setting (Standard F)	**22**					11.8	54
Community, Consumer, and Environmental Health	**26**					15.9	61
Personal and Nutritional Health	**37**					21.9	59
Family Life Education and Growth and Development	**25**					15.5	62
Safety and Injury Prevention	**21**					13.9	66
Tobacco, Alcohol, and Other Drug Use Prevention	**36**					20.6	57
Prevention and Control of Disease and Disorders	**35**					20.3	58

HEALTH EDUCATION RESULTS
(CONTINUED)

School:
District:
Grade: 11
Date: DECEMBER 2002

Reporting Categories	School % Students in Each Category	School Scaled Score	School % Exceeds or Meets the Standards	School % Partially Meets the Standards	School % Does Not Meet the Standards	State % Students in Each Category	State Scaled Score	State % Exceeds or Meets the Standards	State % Partially Meets the Standards	State % Does Not Meet the Standards
Gender										
female						49	540	37	61	2
male						51	535	21	72	7
Ethnicity										
White (non-Hispanic)						93	538	29	66	4
Black (non-Hispanic)						1	532	17	68	15
Hispanic						1	535	22	71	7
Asian/Pacific Islander						1	538	28	69	3
American Indian/Alaskan native						1	533	17	75	9
multi-ethnic						2	538	29	66	5
not reported						1	536	24	72	4
Internet access at home										
yes						85	538	31	65	3
no						15	534	17	73	10
Migrant										
students eligible, not served						0	533	15	71	13
students eligible, served, not tutored						0	534	17	79	4
students eligible, served, tutored						0	532	9	82	9
Gifted/talented program										
yes						2	544	59	41	0
no						98	537	28	67	4
Identified disability										
yes						10	529	4	76	21
no						90	539	32	66	3
Language minority/LEP student										
bilingual never identified LEP						0	532	13	60	27
former LEP reclassified non-LEP						0	531	12	76	12
current LEP						0	532	8	86	5
First grade in district										
before grade 9						76	538	30	65	4
grade 9						13	537	28	68	4
grade 10						4	536	22	76	3
grade 11						7	535	22	70	8
College prep										
yes						73	540	36	62	2
no						27	533	12	80	8
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch. % Students in Each Category	State % Students in Each Category	State Scaled Score	State % Exceeds or Meets the Standards	State % Does Not Meet the Standards
How much did you learn about predicting the immediate and long-term impact of health decisions in your high school health education class?					
a lot		46	540	36	2
some		49	537	25	5
nothing		6	532	15	15
How much did you learn about the relationship between health practices and individual well-being in your high school health education class?					
a lot		39	539	36	3
some		54	537	26	4
nothing		7	534	19	13
How do you feel about the following statement? "My knowledge of health education will be useful to me as an adult."					
strongly agree		38	539	33	3
agree		53	538	28	4
disagree		7	535	22	8
strongly disagree		2	531	9	19
Think about what you learned in high school health education class. Which area have you found most useful?					
growth and development, such as physical changes; and personal hygiene including physical activity		21	537	26	5
mental health, such as stress management		27	539	33	3
nutrition, such as eating healthy snacks		21	538	31	4
substance abuse prevention, such as tobacco, alcohol, and other drugs		31	537	26	4
High school career pathway					
college prep		74	540	37	2
tech prep		18	533	10	9
occupational prep		6	531	9	14
apprenticeship programs		1	530	9	20
Hours worked at part-time job during school week					
do not work part-time during school week		52	538	31	4
8 hours or fewer		19	538	31	4
9-21 hours		27	537	25	4
more than 21 hours		3	533	15	13
Parent education					
did not finish high school		5	532	12	11
graduated from high school		25	535	19	6
some education after high school		27	538	28	4
college and/or advanced degree		44	540	38	3

Common Item Class Report

ELA WRITING

Grade 11

Code:
District:
School:
Class:
Date: December 2002
Group Size:

Name	Writing Prompt			Reading/Writing Extended-Response			Total Writing			Scaled Score	Performance Level
	Stylistic and Rhetorical Aspects (12 possible points)	Standard English Conventions (8 possible points)	Total (20 possible points)	Stylistic and Rhetorical Aspects (6 possible points)	Standard English Conventions (4 possible points)	Total (10 possible points)	Stylistic and Rhetorical Aspects (18 possible points)	Standard English Conventions (12 possible points)	Total (30 possible points)		
Percent Correct/Avg. Score: Class											
Percent Correct/Avg. Score: School											
Percent Correct/Avg. Score: District											
Percent Correct/Avg. Score: State	6.5	5.7	12.2	2.6	2.4	4.9	9.1	8.0			

Common Item Class Report

ELA READING

Grade 11

Code:
District:
School:
Class:
Date: December 2002
Group Size:

Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Points Earned (48 Max. Points)	Scaled Score	Performance Level
Content Standard and Performance Indicator	D2	A3	A3	D5	A3	D5	D5	D5	D5	D5	B5	C1	B7	B9	B7	D5	D2	D5	C8	D5	B6	B2	B7	B6	B2	B7	A9	B7	A10	B2			
Item Type	MC	MC	MC	MC	MC	MC	MC	MC	CR	CR	MC	MC	MC	MC	CR	MC	MC	MC	MC	CR	MC	MC	MC	MC	MC	MC	MC	MC	CR	CR			
Correct MC Response	A	B	A	D	B	C	C	D			A	C	B	B		A	C	B	D		B	A	C	A	B	D	D	C					
Name / Total Possible Points	1	1	1	1	1	1	1	1	4	4	1	1	1	1	4	1	1	1	1	4	1	1	1	1	1	1	1	1	4	4			

Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Percent Correct/Avg. Score: Class																														
Percent Correct/Avg. Score: School																														
Percent Correct/Avg. Score: District																														
Percent Correct/Avg. Score: State	46	75	76	64	55	87	50	75	1.9	1.9	59	71	77	78	1.9	64	76	71	67	1.8	86	91	82	89	92	62	54	88	2.2	2.5

Important Information for Parents/Guardians Grade 11 Assessment December 2002 Administration

STATE OF MAINE
DEPARTMENT OF EDUCATION
23 State House Station
Augusta, ME 04333
June 2003

Susan A. Gendron
COMMISSIONER

Dear Parents and Guardians:

In December 2002, students across the state participated in the Maine Educational Assessment (MEA) tests in English Language Arts—Reading and Writing; this is a report of these results. A second report will be sent to you in September 2003 with the results of the MEA assessments in mathematics, science and technology, and social studies. While the MEA has been administered to Maine students for the past 18 years, it is now designed to measure the progress of schools and students in achieving *Learning Results* expectations adopted by the Legislature in 1997. The MEA is aligned with the content standards described in Maine's *Learning Results,* which are available for your review at the following address: http://www.state.me.us/education/lres/homepage.htm.

The MEA results are reported in four performance levels that describe the quality of a student's responses on each of the content area tests. While many students do not yet meet the *Learning Results* standards, keep in mind that these are new challenging standards for student performance. Our long-term goal is for all students to meet the standards so that Maine youth will be among the best educated in the world.

GRADE 11

To fairly assess student progress in achieving *Learning Results*, Maine has chosen to use multiple local measures along with the MEA to create a more complete picture of a student's achievement. The MEA, as one measure of student performance, should be viewed with local measures of achievement, such as portfolios of student work, performance exhibitions, and end-of-term grades. The staff at your school will be able to provide further information about your student's performance on the MEA as well as the school's performance. I encourage you to contact the school to begin a conversation that will support your child's success.

Sincerely,

Susan A. Gendron

Susan A. Gendron
Commissioner

Information on Maine's *Learning Results*

- The *Learning Results* were developed in eight content areas by thousands of Maine citizens.
- The MEA was rewritten by hundreds of Maine teachers to align with the *Learning Results.*
- Setting MEA performance standards based on the quality of student work was completed by hundreds of Maine teachers and citizens.
- For a copy of Maine's *Learning Results,* either call 624-6629 or find them on-line at http://www.state.me.us/education/lres/homepage.htm.

Performance Levels and Score Ranges

On this assessment, results are reported as four performance levels using scaled scores that range from 501 to 580. **The text below describes the quality of student work for each performance level.**

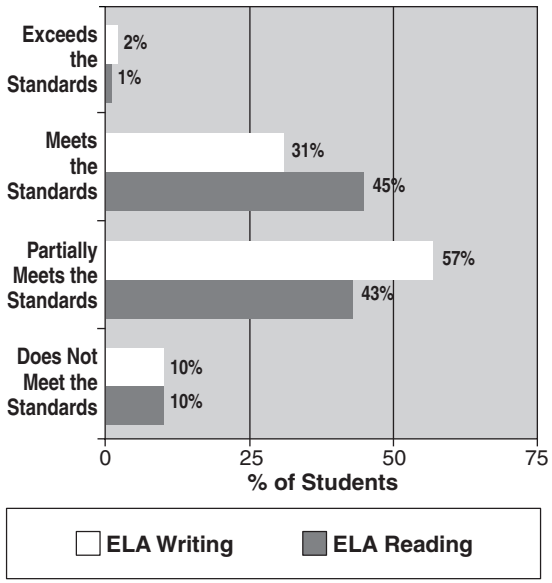
❒ **Exceeds the Standards (561 to 580)**
The student's work demonstrates exemplary accomplishment of content knowledge, analysis, problem-solving, and communication skills.

❒ **Meets the Standards (541 to 560)**
The student's work demonstrates consistent accomplishment of content knowledge, analysis, problem-solving, and communication skills.

❒ **Partially Meets the Standards (521 to 540)**
The student's work demonstrates inconsistent accomplishment of content knowledge, analysis, problem-solving, and communication skills.

❒ **Does Not Meet the Standards (501 to 520)**
The student's work demonstrates limited command of content knowledge, analysis, problem-solving, and communication skills.

Maine State MEA Summary Results December 2002 Administration



Student	Grade	School	District
	11		

Content Area	Performance Level	Score	This Student's Performance Levels and Scores
			Does Not Meet the Standards / Partially Meets the Standards / Meets the Standards / Exceeds the Standards
ELA* Writing			
ELA* Reading			

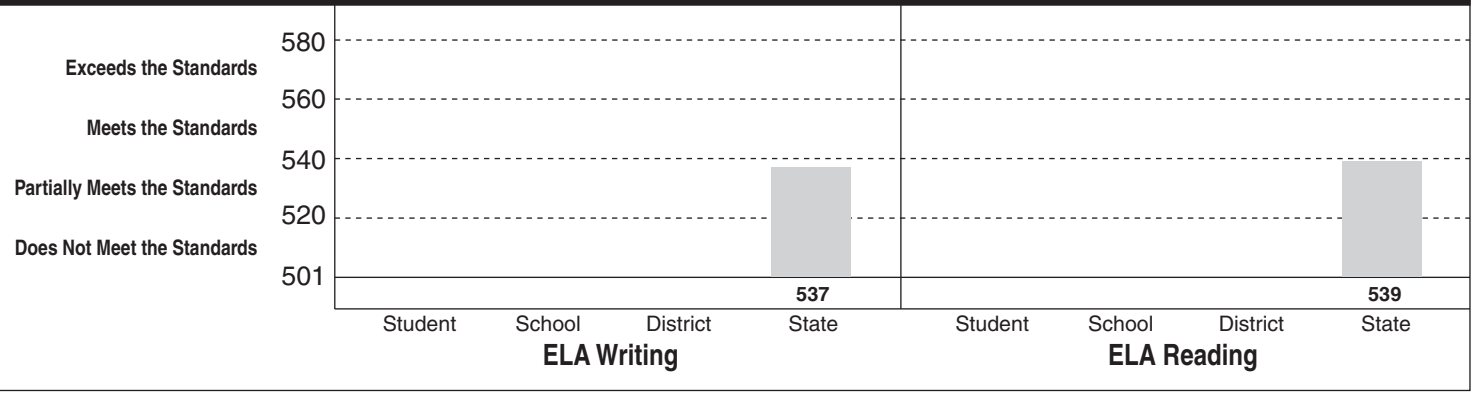
501 520 540 560 580

***ELA** is an abbreviation for English Language Arts
Testing Incomplete (TI): Student failed to attempt one or more sessions.

See reverse side for description of performance levels and state summary results.

The diamond (◆) represents the student's score. The bar (▬) surrounding the score represents the probable range of scores for the student if he or she were to be tested many times. This statistic is called the standard error of measurement.

How this Student's Performance Compared to Average Scores from School, District, and State



This Student's Performance in Content Area Subcategories

Content Areas	Content Area Subcategories	Student's Score Compared with Meeting the State Standards (Weaker / Meets the Standards / Stronger)
ELA Writing	Standard English Conventions (Standard F)	
	Stylistic and Rhetorical Aspects of Writing (Standard G)	
ELA Reading	Reading Process, Language, and Comprehension (Standards A, B, C, D)	

Definitions of Content Area Subcategories

Standard English Conventions: Refers to a student's ability to write correctly. Scoring focused on sentence structure, grammar and usage, and mechanics.

Stylistic and Rhetorical Aspects of Writing: Refers to a student's ability to use writing to explore ideas, to present lines of thought, to represent and reflect on human experience, and to communicate feelings, knowledge, and opinions. Scoring focused on topic development, organization, use of supportive details, and varied language and style.

Reading Process, Language, and Comprehension: Refers to a student's level of comprehension of literary reading selections (e.g., fiction, short stories, poetry) and informational reading selections (e.g., newspaper articles, informational essays, textbook passages), as well as a student's use of reading strategies, language, and analysis.

Name:
School:
District:
Performance Levels **Scaled Scores**

Grade: 11 **Writing:**
Date: 12/02 **Reading:**

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:
Performance Levels Scaled Scores

Grade: 11 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:
Performance Levels Scaled Scores

Grade: 11 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:
Performance Levels Scaled Scores

Grade: 11 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:
Performance Levels Scaled Scores

Grade: 11 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:
Performance Levels Scaled Scores

Grade: 11 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:
Performance Levels Scaled Scores

Grade: 11 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:
Performance Levels Scaled Scores

Grade: 11 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:
Performance Levels Scaled Scores

Grade: 11 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

DEPARTMENT OF EDUCATION

2002-2003 School Year Reports

Dear School Board Members and School Personnel:

The Maine Educational Assessment (MEA) is the state's measure of student progress in achieving the challenging academic expectations adopted in 1997 in the *Learning Results*. This report of student performance in mathematics, science and technology, social studies, and visual and performing arts is the second of two reports for the 2002–2003 school year. The first report for reading, writing, and health education was released in June of 2003. In analyzing school and district performance, it is recommended that you examine both reports together.

Beginning with these 2002–2003 school reports, the MEA is converting to an electronic format for distributing results. While the Parent Report continues to be produced on paper, all other reports are distributed through a series of three CDs including

- School and District Reports that provide comprehensive summaries of results;
- Common Item Reports that will, for the first time, include a file to enable local analysis of results;
- back up copies of the Parent Report; and
- released test items, scoring guides, and student response samples.

It is hoped that this new electronic format will make the reports more easily available to teachers and the public through posting on school or district Web sites.

The 2002–2003 MEA reports complete the picture of benchmarks necessary for measuring student achievement of the *Learning Results* standards. Maine Department of Education Informational Letter #67 describes changes in the MEA design for the 2003 – 2004 school year. These changes are designed to strengthen the program's capacity for reporting individual student achievement of *Learning Results* expectations. The result will be more detailed parent and school reports of student performance. The new design will assess reading, writing, mathematics, and science in a single test administration period scheduled for March of 2004.

I look forward to working with you in support of our continuing efforts to improve the quality and effectiveness of the instructional opportunities designed to help all students achieve high standards.

Sincerely,

Susan A. Gendron

Susan A. Gendron
Commissioner

Educational Assessment School Report

ID:

School:

District:

Grade: 4

Test Date: MARCH 2003

Contents of the Report

The report is divided into six main sections including a section describing the students tested and a separate section for the results in each content area.

Topic	*Page*
Summary of Scores	2
Summary of Student Participation	3
Mathematics Results	4-5
Science & Technology Results	6-7
Social Studies Results	8-9
Visual & Performing Arts Results	10-11

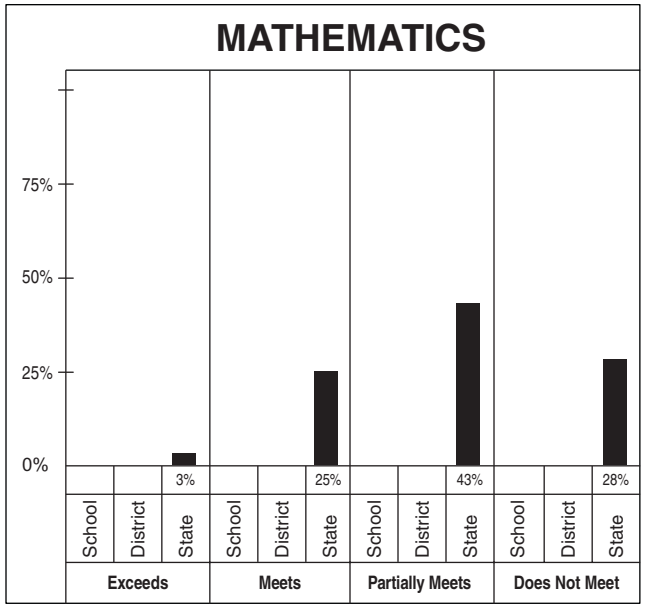
MAINE EDUCATIONAL ASSESSMENT

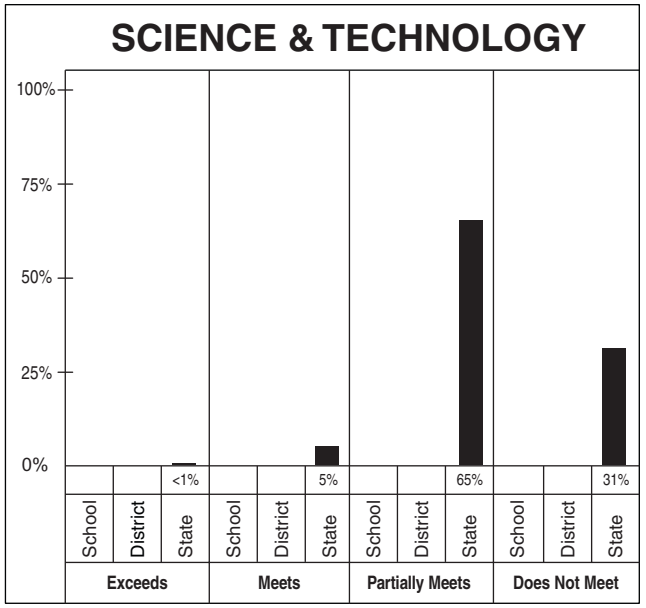
SUMMARY OF SCORES

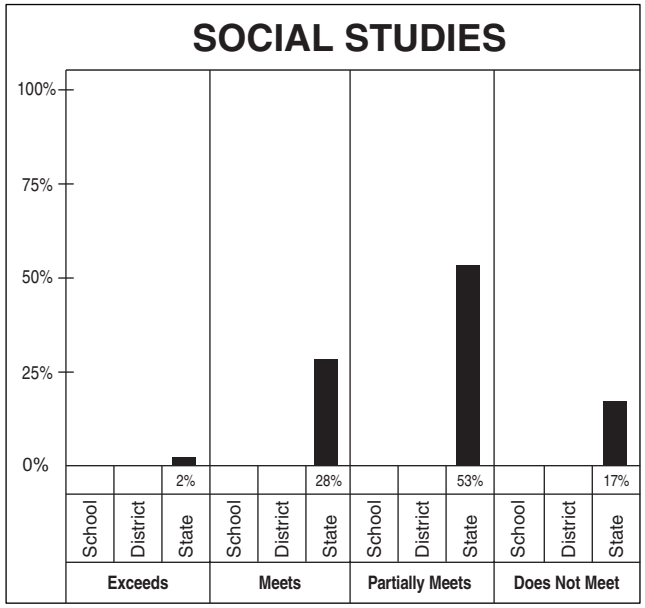
School:
District:
Grade: 4
Date: MARCH 2003

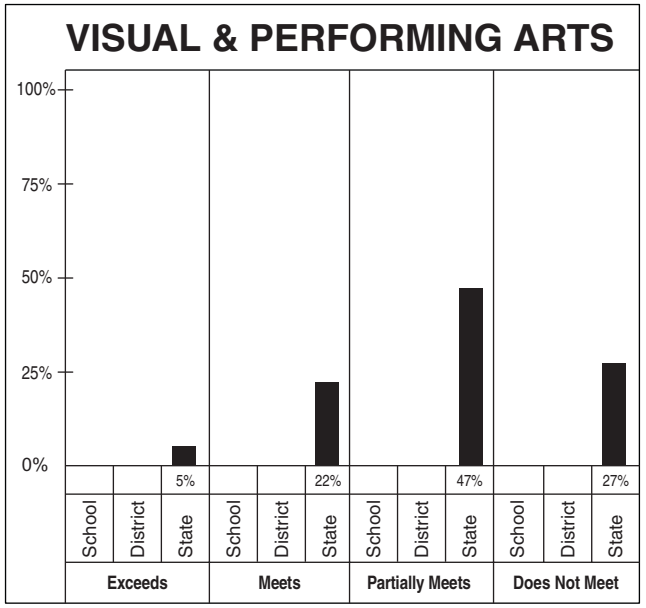
Executive Summary of School, District, and State Scores

Year	Average Performance Score		
	School	District	State
MATHEMATICS			
2000–2001			531
2001–2002			530
2002–2003			**532**
Cum. Avg.			531
SCIENCE & TECHNOLOGY			
2000–2001			527
2001–2002			526
2002–2003			**526**
Cum. Avg.			526
SOCIAL STUDIES			
2000–2001			534
2001–2002			534
2002–2003			**534**
Cum. Avg.			534
VISUAL & PERFORMING ARTS			
2000–2001			532
2001–2002			529
2002–2003			**531**
Cum. Avg.			531









SUMMARY OF STUDENT PARTICIPATION

Maine Educational Assessment

School:
District:
Grade: 4
Date: MARCH 2003

CATEGORY OF PARTICIPATION

Enrollment[1]
on the first day of testing

CONTENT AREA PARTICIPATION[2]

CATEGORY OF PARTICIPATION	Enrollment[1] on the first day of testing						Mathematics						Science & Tech.						Social Studies						Visual & Perf. Arts					
	School		District		State		School		District		State		School		District		State		School		District		State		School		District		State	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Number of students					15500	100					15378	99					15400	99					15407	99					15337	99
Ethnicity					15500	100					15378	99					15400	99					15407	99					15337	99
White (non-Hispanic)					14297	92					14200	99					14230	100					14222	99					14175	99
Black (non-Hispanic)					208	1					201	97					193	93					208	100					191	92
Hispanic					107	1					105	98					105	98					104	97					104	97
Asian/Pacific Islander					161	1					158	98					155	96					159	99					154	96
American Indian/Alaskan Native					204	1					202	99					203	100					202	99					203	100
Multi-ethnic					294	2					292	99					294	100					293	100					291	99
Not reported					229	1					220	96					220	96					219	96					219	96
Identified disability					2403	16					2362	98					2369	99					2366	98					2345	98
Current LEP					128	1					120	94					104	81					125	98					103	80
Internet access at home					15500	100					15378	99					15400	99					15407	99					15337	99
Yes					10968	71					10963	100					10959	100					10960	100					10962	100
No					4532	29					4415	97					4441	98					4447	98					4375	97

MODE OF PARTICIPATION[3]

MODE OF PARTICIPATION[3]	Mathematics						Science & Tech.						Social Studies						Visual & Perf. Arts					
	School		District		State		School		District		State		School		District		State		School		District		State	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Students who took the assessment without accommodations					12613	82					12657	82					12687	82					12789	83
Students who took the assessment with accommodations					2628	17					2639	17					2596	17					2548	17
Identified disability (PET/IEP)					2014	77					2057	78					2037	78					2012	79
LEP					89	3					62	2					61	2					60	2
504 plan					66	3					67	3					67	3					65	3
Other					475	18					469	18					446	17					426	17
Students recommended for participation in alternate assessment (PAAP)					137	1					104	1					124	1						
Identified disability (PET/IEP)					134	98					98	94					99	80						
LEP					1	1					1	1					22	18						
504 plan					0	0					0	0					0	0						
Other					3	2					5	5					4	3						

[1] Percents are the percentage of students enrolled in each participation category. [2] Percents are the percentage of students in the participation category who participated in the content area.
[3] Percents are the percentage of students in each content area who participated with each mode of participation.

MAINE EDUCATIONAL ASSESSMENT

MATHEMATICS RESULTS

School:
District:
Grade: 4
Date: MARCH 2003

PERFORMANCE LEVELS		STUDENTS AT EACH PERFORMANCE LEVEL				
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in mathematics. The student demonstrates exemplary knowledge of content, process, reasoning and communication skills, and problem-solving ability (scaled scores: 561–580).	2000–2001					1
	2001–2002					2
	2002–2003					**3**
	Cumulative Average					2
Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in mathematics. The student demonstrates consistent knowledge of mathematical content, process, reasoning and communication skills, and problem-solving ability (scaled scores: 541–560).	2000–2001					22
	2001–2002					21
	2002–2003					**25**
	Cumulative Average					23
Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in mathematics. The student demonstrates partial and/or inconsistent knowledge of mathematical content, process, reasoning and communication skills, and problem-solving ability (scaled scores: 521–540).	2000–2001					54
	2001–2002					49
	2002–2003					**43**
	Cumulative Average					49
Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in mathematics. The student demonstrates limited knowledge of mathematical content, process, reasoning and communication skills, and problem-solving ability (scaled scores: 501–520).	2000–2001					23
	2001–2002					29
	2002–2003					**28**
	Cumulative Average					27

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Content	**98**					60.5	62
Application	**94**					47.0	50
Numbers and Number Sense (Standard A)	**29**					16.5	57
Computation (Standard B)	**31**					14.9	48
Data Analysis and Statistics (Standard C)	**22**					14.3	65
Probability (Standard D)	**15**					9.2	61
Geometry (Standard E)	**23**					12.9	56
Measurement (Standard F)	**23**					13.9	60
Patterns, Relations, Functions (Standard G)	**24**					13.6	57
Algebra Concepts (Standard H)	**16**					8.2	51
Discrete Mathematics (Standard I)	**9**					4.0	44

MAINE EDUCATIONAL ASSESSMENT

MATHEMATICS RESULTS
(CONTINUED)

School:
District:
Grade: 4
Date: MARCH 2003

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						49	532	28	44	28
male						51	532	29	43	27
Ethnicity										
White (non-Hispanic)						92	532	29	43	27
Black (non-Hispanic)						1	522	7	47	46
Hispanic						1	530	22	49	29
Asian/Pacific Islander						1	531	31	37	33
American Indian/Alaskan native						1	524	13	41	46
multi-ethnic						2	532	29	44	28
not reported						1	531	27	47	26
Internet access at home										
yes						72	534	32	43	24
no						28	527	20	44	37
Title 1 program										
students currently served in mathematics						7	522	8	43	49
students previously served in mathematics						8	523	9	47	44
new students currently served in reading						1	521	7	35	58
new students previously served in reading						2	524	10	48	42
Migrant										
students eligible, not served						0	524	16	27	57
students eligible, served, not tutored						1	524	13	47	41
students eligible, served, tutored						1	525	20	37	42
Gifted/talented program										
yes						4	552	85	14	1
no						96	531	26	45	29
Identified disability										
yes						15	520	8	37	54
no						85	534	32	45	23
Language minority/LEP student										
bilingual never identified LEP						0	534	31	46	23
former LEP reclassified non-LEP						0	526	16	43	41
current LEP						1	525	18	36	46
First grade in district										
pre-k or kindergarten						69	533	30	44	26
first or second grade						15	532	29	43	27
third grade						8	530	24	45	31
fourth grade						9	528	22	42	36
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
Do the questions on this MEA test match what you have learned in mathematics?					
Yes, the questions match what I've learned.		39	535	37	23
Yes, they match some of what I've learned.		45	532	27	26
Yes, but they match just a little of what I've learned.		12	527	17	39
No, there was no match.		5	521	11	53
How often do you use hands-on materials (cubes, rods, tiles, tangrams, etc.) in mathematics class?					
almost every day		16	527	21	39
two or three days a week		33	532	29	26
two or three times each month		38	535	35	22
never		13	529	24	34
How often do you work in small groups in mathematics class?					
almost every day		20	529	23	34
two or three days a week		36	533	30	26
two or three days each month		31	534	33	23
never		13	530	25	33
How often do you do mathematics activities or take tests where you earn points for what you have written even if it is not completely correct?					
most of the time		32	533	31	26
sometimes		57	532	29	27
never		11	531	28	30
How often do you use calculators in mathematics class?					
almost every day		6	524	16	47
two or three days a week		22	530	25	31
two or three times each month		48	534	33	23
never		25	531	28	29
"I learn in school most of what I need to know to answer the MEA mathematics questions."					
It is true about me.		68	535	35	22
It is not true about me.		6	527	19	39
I am not sure.		25	527	17	39
How often do you use a computer in school to work on mathematics activities?					
almost every day		4	523	17	53
two or three days a week		13	529	22	33
two or three times each month		22	534	33	23
never		61	532	30	26
How much TV do you watch on school nights?					
none		7	534	37	26
less than one hour		28	533	31	26
one to two hours		35	534	33	22
more than two hours		30	528	21	36

MAINE EDUCATIONAL ASSESSMENT

SCIENCE & TECHNOLOGY RESULTS

School:
District:
Grade: 4
Date: MARCH 2003

PERFORMANCE LEVELS	STUDENTS AT EACH PERFORMANCE LEVEL					
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in science and technology. The student demonstrates exemplary knowledge of content including life, physical, and earth/space sciences *and* scientific inquiry, reasoning, and communication skills (scaled scores: 561–580).	2000–2001					<1
	2001–2002					<1
	2002–2003					**<1**
	Cumulative Average					<1
Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in science and technology. The student demonstrates consistent knowledge of content including life, physical, and earth/space sciences *and* scientific inquiry, reasoning, and communication skills (scaled scores: 541–560).	2000–2001					4
	2001–2002					3
	2002–2003					**5**
	Cumulative Average					4
Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in science and technology. The student demonstrates partial and/or inconsistent knowledge of content including life, physical, and earth/space sciences *and* scientific inquiry, reasoning, and communication skills (scaled scores: 521–540).	2000–2001					68
	2001–2002					69
	2002–2003					**65**
	Cumulative Average					67
Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in science and technology. The student demonstrates limited knowledge of content including life, physical, and earth/space sciences *and* scientific inquiry, reasoning, and communication skills (scaled scores: 501-520).	2000–2001					28
	2001–2002					28
	2002–2003					**31**
	Cumulative Average					29

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Content	**118**					73.7	62
Classifying Life Forms (Standard A)	**12**					8.7	73
Ecology (Standard B)	**17**					11.5	68
Cells (Standard C)	**13**					7.7	59
Continuity and Change (Standard D)	**11**					9.1	83
Structure of Matter (Standard E)	**10**					5.1	51
The Earth (Standard F)	**8**					4.5	56
The Universe (Standard G)	**16**					8.9	56
Energy (Standard H)	**19**					11.0	58
Motion (Standard I)	**12**					7.2	60
Application	**74**					43.3	59
Inquiry and Problem Solving (Standard J)	**18**					9.6	53
Scientific Reasoning (Standard K)	**20**					12.8	64
Communication (Standard L)	**20**					12.5	63
Implications of Science & Technology (Standard M)	**16**					8.4	53

SCIENCE & TECHNOLOGY RESULTS
(CONTINUED)

MAINE EDUCATIONAL ASSESSMENT

School:
District:
Grade: 4
Date: MARCH 2003

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						49	526	4	63	33
male						51	527	5	66	29
Ethnicity										
White (non-Hispanic)						92	526	5	65	30
Black (non-Hispanic)						1	520	1	46	54
Hispanic						1	525	2	64	34
Asian/Pacific Islander						1	523	3	54	43
American Indian/Alaskan native						1	521	1	51	48
multi-ethnic						2	526	5	65	30
not reported						1	525	4	61	34
Internet access at home										
yes						72	527	5	68	27
no						28	524	3	57	40
Title 1 program										
students currently served in mathematics						7	521	1	46	53
students previously served in mathematics						8	522	1	50	49
new students currently served in reading						1	519	1	36	63
new students previously served in reading						2	522	2	50	48
Migrant										
students eligible, not served						0	521	3	39	58
students eligible, served, not tutored						1	521	1	50	49
students eligible, served, tutored						1	520	3	44	53
Gifted/talented program										
yes						4	537	24	74	2
no						96	526	4	64	32
Identified disability										
yes						15	521	1	45	54
no						85	527	5	68	27
Language minority/LEP student										
bilingual never identified LEP						0	526	8	58	34
former LEP reclassified non-LEP						0	520	0	37	63
current LEP						1	521	3	49	48
First grade in district										
pre-k or kindergarten						69	527	5	66	29
first or second grade						15	526	5	65	31
third grade						8	525	3	61	36
fourth grade						9	524	2	59	38
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
Which statement best describes how you learn science and technology?					
I mostly read a textbook and answer questions, and/or take notes and do assignments.		24	526	4	32
I use science kits for demonstrations and experiments.		9	524	3	39
I work in groups to design and conduct experiments.		19	524	3	36
I use a combination of the options above.		48	527	6	26
How often do you have science classes?					
every day		22	526	5	33
a few times a week		57	527	5	28
once a week		9	525	4	36
a few times a month		11	525	3	36
What things do you learn about in your fourth-grade science classes?					
nature, plants, and animals		18	526	4	32
nature, plants, animals, Earth, rocks, and minerals		31	525	4	36
everything above, plus motion, energy, and matter		52	527	6	27
How often do you do science activities or take tests where you earn points for what you have written even if it is not completely correct?					
never		11	526	5	29
sometimes		64	526	5	30
most of the time		25	526	5	33
How well prepared do you feel you were to take the science and technology portion of the MEA test?					
very well prepared		37	527	6	28
somewhat prepared		44	527	4	27
not prepared at all		4	522	1	49
I do not know.		16	523	2	41
"I learn in school most of what I need to know to answer the MEA science questions."					
It is true about me.		56	527	6	25
It is not true about me.		8	526	5	31
I am not sure.		37	524	3	38
Do the questions on this MEA test match what you have learned in science and technology?					
Yes, the questions on the test match the science and technology classes.		21	526	6	34
Yes, they match some of what I have learned.		54	527	5	26
Yes, but they matched just a little of what I have learned.		18	525	3	34
No, there was no match.		7	522	1	48
How much TV do you watch on school nights?					
none		7	527	9	29
less than one hour		28	527	6	28
one to two hours		35	527	5	26
more than two hours		30	524	2	39

MAINE EDUCATIONAL ASSESSMENT

SOCIAL STUDIES RESULTS

School:
District:
Grade: 4
Date: MARCH 2003

PERFORMANCE LEVELS		STUDENTS AT EACH PERFORMANCE LEVEL				
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in social studies. The student demonstrates exemplary knowledge of content of major social studies concepts, consistently applies complex thinking skills, and communicates ideas clearly in all situations (scaled scores: 561–580).	2000–2001					1
	2001–2002					1
	2002–2003					**2**
	Cumulative Average					1
Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in social studies. The student demonstrates consistent knowledge of content of major social studies concepts, usually applies complex thinking skills, and communicates ideas clearly in most situations (scaled scores: 541–560).	2000–2001					29
	2001–2002					27
	2002–2003					**28**
	Cumulative Average					28
Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in social studies. The student demonstrates some knowledge of major social studies concepts, inconsistently applies complex thinking skills, and communicates ideas clearly in some situations (scaled scores: 521–540).	2000–2001					57
	2001–2002					56
	2002–2003					**53**
	Cumulative Average					55
Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in social studies. The student demonstrates limited knowledge of content of major social studies concepts, does not apply complex thinking skills, and communicates ideas clearly in few or no situations (scaled scores: 501-520).	2000–2001					13
	2001–2002					16
	2002–2003					**17**
	Cumulative Average					15

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Content	**129**					78.5	61
Application	**63**					25.3	40
Civics and Government (Standards A, B, and C)	**45**					22.7	50
Rights, Responsibilities, and Participation (Standard A)	**13**					7.6	58
Purpose, Types, and Fundamental Principles of Government and Constitutions (Standards B and C)	**32**					15.1	47
History (Standards A, B, and C)	**50**					25.4	51
Chronology, Historical Knowledge, Concepts, and Patterns (Standards A and B)	**34**					18.0	53
Historical Inquiry, Analyisis, and Interpretation (Standard C)	**16**					7.4	46
Geography (Standards A and B)	**51**					29.7	58
Skills and Tools (Standard A)	**29**					17.9	62
Human Interaction with Environments (Standard B)	**22**					11.8	54
Economics (Standards A, B, C, and D)	**46**					26.0	57

MAINE EDUCATIONAL ASSESSMENT

SOCIAL STUDIES RESULTS
(CONTINUED)

School:
District:
Grade: 4
Date: MARCH 2003

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						49	534	31	52	17
male						51	533	28	54	17
Ethnicity										
White (non-Hispanic)						92	534	30	53	17
Black (non-Hispanic)						1	528	14	52	35
Hispanic						1	534	30	55	15
Asian/Pacific Islander						1	531	27	48	25
American Indian/Alaskan native						1	528	17	50	32
multi-ethnic						2	534	29	53	19
not reported						1	532	26	54	20
Internet access at home										
yes						72	535	33	52	14
no						28	530	19	57	24
Title 1 program										
students currently served in mathematics						7	527	11	56	33
students previously served in mathematics						8	528	14	57	29
new students currently served in reading						1	524	6	53	41
new students previously served in reading						2	528	16	55	30
Migrant										
students eligible, not served						0	525	18	39	42
students eligible, served, not tutored						1	527	8	61	31
students eligible, served, tutored						1	527	20	45	35
Gifted/talented program										
yes						4	549	78	21	1
no						96	533	27	55	18
Identified disability										
yes						15	525	9	51	40
no						85	536	33	54	13
Language minority/LEP student										
bilingual never identified LEP						0	534	29	45	26
former LEP reclassified non-LEP						0	525	9	56	36
current LEP						1	527	14	53	33
First grade in district										
pre-k or kindergarten						69	535	31	53	16
first or second grade						15	534	30	53	18
third grade						8	532	24	56	21
fourth grade						9	531	21	54	24
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
Which statement best describes your social studies class work?					
The teacher tells us about social studies topics.		19	531	22	24
We read a textbook and talk about it in class.		29	535	33	14
We read a textbook and the teacher talks about it in class.		16	534	30	15
We do projects on different topics and themes.		36	534	30	16
How do you spend most of your class time in social studies?					
working by myself		24	533	27	17
working in small groups		15	531	21	22
doing some work by myself and in small groups		43	536	34	13
The whole class works together.		18	533	29	21
How well prepared do you feel you were to take the social studies portion of the MEA test?					
very well prepared		34	536	36	16
somewhat prepared		48	535	30	14
not prepared at all		4	526	12	33
I don't know.		14	529	19	27
Think about a project that you did in social studies this year. What did you use the most to help you do the project?					
magazines, newspapers, and books		32	535	32	16
the encyclopedia or atlas		21	534	29	17
the Internet		27	535	31	16
I did not do any projects in social studies.		21	532	25	19
"I learn in school most of what I need to know to answer the MEA social studies questions."					
It is true for me.		59	536	36	12
It is not true for me.		7	531	22	25
I am not sure.		34	531	20	22
How often do you do social studies activities or take tests where you earn points for what you have written even if it is not completely correct?					
once a week		35	532	26	20
once or twice a month		44	536	33	13
once or twice a year		9	534	32	19
never		12	533	26	20
Did you go on field trips that taught you more about what you were learning in social studies class?					
yes		54	535	32	16
no		46	533	28	17
How much TV do you watch on school nights?					
none		7	536	39	18
less than one hour		28	535	33	16
one to two hours		35	536	34	12
more than two hours		30	530	20	24

MAINE EDUCATIONAL ASSESSMENT

VISUAL & PERFORMING ARTS RESULTS

School:
District:
Grade: 4
Date: MARCH 2003

PERFORMANCE LEVELS		STUDENTS AT EACH PERFORMANCE LEVEL				
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in visual and performing arts. The student demonstrates exemplary knowledge of content and application of skills of the visual and performing arts including creative expression, cultural heritage, and criticism and aesthetics (scaled scores: 561–580).	2000–2001					4
	2001–2002					3
	2002–2003					**5**
	Cumulative Average					4
Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in visual and performing arts. The student demonstrates consistent knowledge of content and application of skills of the visual and performing arts including creative expression, cultural heritage, and criticism and aesthetics (scaled scores: 541–560).	2000–2001					23
	2001–2002					18
	2002–2003					**22**
	Cumulative Average					21
Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in visual and performing arts. The student demonstrates partial and/or inconsistent knowledge of content and application of skills of the visual and performing arts including creative expression, cultural heritage, and criticism and aesthetics (scaled scores: 521–540).	2000–2001					50
	2001–2002					48
	2002–2003					**47**
	Cumulative Average					48
Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in visual and performing arts. The student demonstrates limited knowledge of content and application of skills of the visual and performing arts including creative expression, cultural heritage, and criticism and aesthetics (scaled scores: 501–520).	2000–2001					24
	2001–2002					31
	2002–2003					**27**
	Cumulative Average					27

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Dance	**25**					13.1	52
Music	**37**					22.4	61
Theater	**25**					12.6	50
Visual Arts	**33**					19.8	60
Creative Expression (Standard A)	**48**					27.8	58
Cultural Heritage (Standard B)	**33**					18.2	55
Criticism and Aesthetics (Standard C)	**39**					22.0	56

MAINE EDUCATIONAL ASSESSMENT

VISUAL & PERFORMING ARTS RESULTS
(CONTINUED)

School:
District:
Grade: 4
Date: MARCH 2003

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						49	533	31	45	23
male						51	529	22	48	30
Ethnicity										
White (non-Hispanic)						93	531	27	47	26
Black (non-Hispanic)						1	525	19	38	43
Hispanic						1	532	28	46	25
Asian/Pacific Islander						1	529	27	39	34
American Indian/Alaskan native						1	524	12	45	43
multi-ethnic						2	532	31	45	24
not reported						1	530	26	40	34
Internet access at home										
yes						72	533	30	47	24
no						28	527	19	46	35
Title 1 program										
students currently served in mathematics						7	524	11	44	44
students previously served in mathematics						8	525	13	47	41
new students currently served in reading						1	521	4	47	49
new students previously served in reading						2	524	11	48	41
Migrant										
students eligible, not served						0	525	19	39	42
students eligible, served, not tutored						1	527	14	50	36
students eligible, served, tutored						1	524	11	46	43
Gifted/talented program										
yes						4	547	66	31	3
no						96	530	25	47	28
Identified disability										
yes						15	523	11	43	47
no						85	532	29	47	23
Language minority/LEP student										
bilingual never identified LEP						0	531	24	55	21
former LEP reclassified non-LEP						0	526	18	43	39
current LEP						1	523	12	43	45
First grade in district										
pre-k or kindergarten						69	532	28	47	26
first or second grade						15	531	27	48	25
third grade						7	529	22	46	32
fourth grade						9	528	21	46	33
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
What best describes how you take part in art lessons at your school?					
Art lessons are offered and I take part.		66	532	28	25
Art lessons are offered but I do not take part.		16	530	23	30
No art lessons are offered at our school.		19	531	25	28
"I learn in school most of what I need to know to answer the MEA visual and performing arts questions."					
It is true about me.		47	532	30	24
It is not true about me.		13	531	26	27
I am not sure.		40	530	24	28
How many field trips has your class made this year to a museum, a concert or performance, or a play?					
three or more		29	532	29	25
two		24	531	28	26
one		26	531	26	26
none		21	530	23	30
How often have artists, musicians, and/or storytellers visited or performed in your school this year?					
three or more times		41	532	30	24
twice		24	531	25	27
once		22	530	25	28
We had no visits or performances at our school.		13	529	23	30
What best describes how often you take part in school- or community-sponsored arts activities (dance, music, plays) outside of the regular school day?					
I take part in the fall, winter, and spring.		28	533	32	24
I take part during two seasons.		12	531	27	27
I take part during one season only.		14	531	27	26
I do not take part in any arts activities.		46	530	24	28
Do you take music lessons outside of school?					
yes		18	536	40	19
no		82	530	24	28
Do you take art or dance lessons outside of school?					
yes		19	534	35	22
no		81	531	25	27
How much TV do you watch on school nights?					
none		7	534	34	22
less than one hour		28	532	30	25
one to two hours		35	533	29	22
more than two hours		30	527	18	35

Common Item Class Report

MATHEMATICS

Grade 4

Code:
District:
School:
Class:
Date: March 2003
Group Size:

| | | |

Common Item Class Report

SCIENCE & TECHNOLOGY

Grade 4

Code:
District:
School:
Class:
Date: March 2003
Group Size:

Name	Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	41	Points Earned (48 Max. Points)	Scaled Score	Performance Level
	Content Standard and Performance Indicator	C4	E2	J1	L6	D2	K6	H2	C1	G2	E2	J2	K6	D4	J3	K3	G1	I3	H1	D1	J1	E2	D3	J2	K3	C2	K1	A1	H1	M4	L4			
	Item Type	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	CR	CR	MC	MC	MC	MC	MC	MC	MC	MC	MC	CR	CR	CR	CR			
	Correct MC Response	B	D	A	D	B	C	C	A	D	D	B	D	A	B	B			B	A	C	A	C	B	D	D	A							
	Total Possible Points	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	4	1	1	1	1	1	1	1	1	1	4	4	4	4			

Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	41
Percent Correct/Avg. Score: Class																														
Percent Correct/Avg. Score: School																														
Percent Correct/Avg. Score: District																														
Percent Correct/Avg. Score: State	78	60	52	81	85	64	68	66	54	77	53	86	86	63	61	2.8	1.8	63	83	80	29	82	86	85	42	66	2.2	1.4	1.7	1.5

Common Item Class Report

SOCIAL STUDIES

Grade 4

Code:
District:
School:
Class:
Date: March 2003
Group Size:

Name	Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	41	Points Earned (48 Max. Points)	Scaled Score	Performance Level
	Content Standard and Performance Indicator	GA1	EC1	CA1	CB2	EA1	HB2	GB2	CA2	GA1	HB1	EB1	CC1	EA2	HA2	GB3	GA1	HB2	CC1	GA2	HB2	EB1	HA1	EA1	GB1	CB2	CA3	HC1	CB1	GA1	EB1			
	Item Type	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	CR	CR	MC	MC	MC	MC	MC	MC	MC	MC	MC	CR	CR	CR	CR			
	Correct MC Response	A	D	A	B	D	B	B	B	D	A	D	C	C	B	D			A	C	D	C	B	A	D	D	A							
	Total Possible Points	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	4	1	1	1	1	1	1	1	1	1	4	4	4	4			

	Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	41
	Percent Correct/Avg. Score: Class																														
	Percent Correct/Avg. Score: School																														
	Percent Correct/Avg. Score: District																														
	Percent Correct/Avg. Score: State	96	77	75	68	69	63	79	64	81	80	90	38	60	71	89	1.4	1.4	67	74	82	59	59	88	93	65	53	1.6	1.4	1.5	2.0

Important Information for Parents/Guardians Grade 4 Assessment March 2003 Administration

STATE OF MAINE
DEPARTMENT OF EDUCATION
23 State House Station
Augusta, ME 04333
September 2003

Susan A. Gendron
COMMISSIONER

Dear Parents and Guardians:

In March 2003, students across the state participated in the Maine Educational Assessment (MEA) tests in mathematics, science and technology, and social studies; this is a report of these results. A report was sent to you in June 2003 with the results of the MEA assessments in English language arts—reading and writing. While the MEA has been administered to Maine students for the past 18 years, it is now designed to measure the progress of schools and students in achieving *Learning Results* expectations adopted by the Legislature in 1997. The MEA is aligned with the content standards described in Maine's *Learning Results,* which are available for your review at the following address: http://www.state.me.us/education/lres/homepage.htm.

The MEA results are reported in four performance levels that describe the quality of a student's responses on each of the content area tests. While many students do not yet meet the *Learning Results* standards, keep in mind that these are new challenging standards for student performance. Our long-term goal is for all students to meet the standards so that Maine youth will be among the best educated in the world.

To fairly assess student progress in achieving *Learning Results*, Maine has chosen to use multiple local measures along with the MEA to create a more complete picture of a student's achievement. The MEA, as one measure of student performance, should be viewed with local measures of achievement, such as portfolios of student work, performance exhibitions, and end-of-term grades. The staff at your school will be able to provide further information about your student's performance on the MEA as well as the school's performance. I encourage you to contact the school to begin a conversation that will support your child's success.

Sincerely,

Susan A. Gendron

Susan A. Gendron
Commissioner

Information on Maine's *Learning Results*

- The *Learning Results* were developed in eight content areas by thousands of Maine citizens.
- The MEA was rewritten by hundreds of Maine teachers to align with the *Learning Results.*
- Setting MEA performance standards based on the quality of student work was completed by hundreds of Maine teachers and citizens.
- For a copy of Maine's *Learning Results,* either call 624-6621 or find them on-line at http://www.state.me.us/education/lres/homepage.htm.

Performance Levels and Score Ranges

On this assessment, results are reported as four performance levels using scaled scores that range from 501 to 580. **The text below describes the quality of student work for each performance level.**

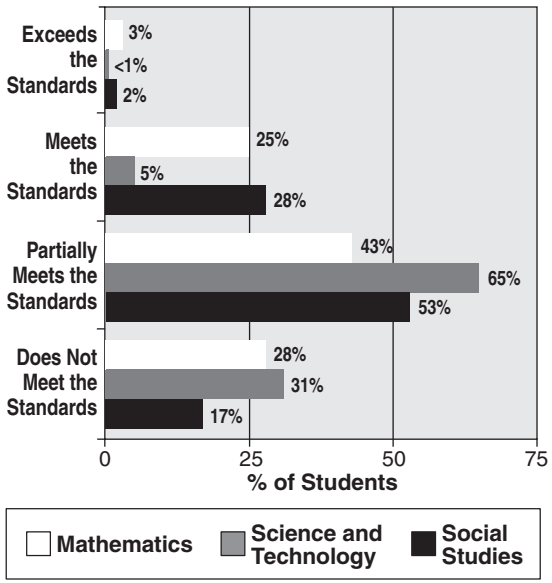
❒ **Exceeds the Standards (561 to 580)**
The student's work demonstrates exemplary accomplishment of content knowledge, analysis, problem-solving, and communication skills.

❒ **Meets the Standards (541 to 560)**
The student's work demonstrates consistent accomplishment of content knowledge, analysis, problem-solving, and communication skills.

❒ **Partially Meets the Standards (521 to 540)**
The student's work demonstrates inconsistent accomplishment of content knowledge, analysis, problem-solving, and communication skills.

❒ **Does Not Meet the Standards (501 to 520)**
The student's work demonstrates limited command of content knowledge, analysis, problem-solving, and communication skills.

Maine State MEA Summary Results March 2003 Administration



Student	Grade	School	District
	4		

Content Area	Performance Level	Score	This Student's Performance Levels and Scores
			Does Not Meet the Standards / Partially Meets the Standards / Meets the Standards / Exceeds the Standards
Mathematics			
Science & Technology			
Social Studies			

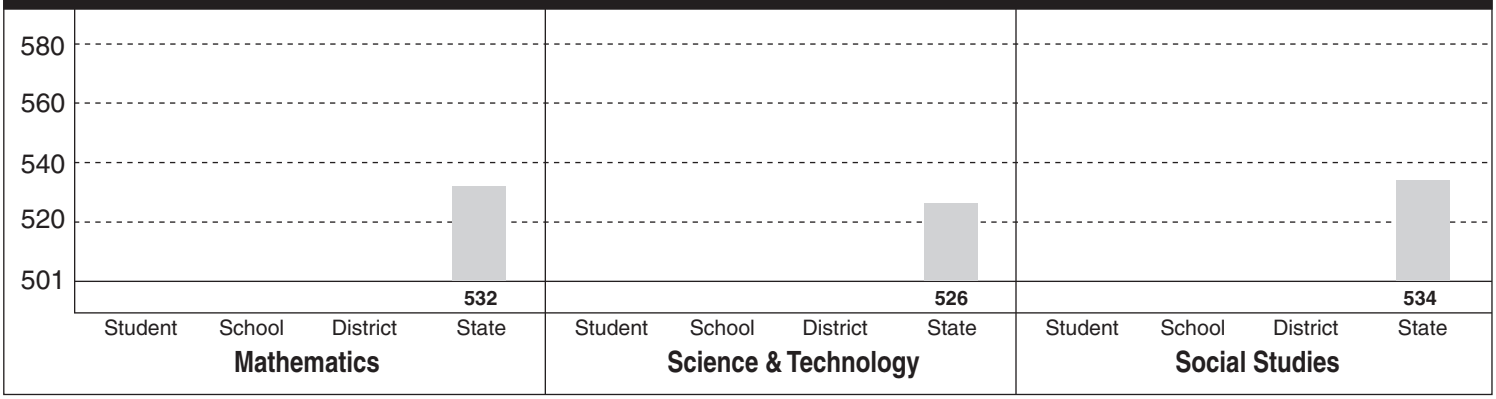
501 520 540 560 580

Testing Incomplete (TI):
Student failed to attempt one or more sessions.

See reverse side for description of performance levels and state summary results.

The diamond (◆) represents the student's score. The bar (▬) surrounding the score represents the probable range of scores for the student if he or she were to be tested many times. This statistic is called the standard error of measurement.

How this Student's Performance Compared to Average Scores from School, District, and State



This Student's Performance in Content Area Subcategories

Content Areas	Content Area Subcategories	Student's Score Compared with Meeting the State Standards: Weaker / Meets the Standards / Stronger
Mathematics	Content	
	Application	
Science & Technology	Content	
	Application	
Social Studies	Content	
	Application	

Definitions of Content Area Subcategories

Content: Refers to a student's knowledge and conceptual understanding of the content area and of the procedures necessary to acquire new learning.

Application: Refers to a student's use of knowledge and to his/her conceptual and procedural understanding for applying knowledge in the content area through reasoning, inquiry, communicating ideas, and/or solving problems.

Scores for Content and Application are derived from particular subsets of items in each content area that emphasize those types of knowledge.

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 4 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 4 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 4 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 4 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 4 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 4 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 4 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 4 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 4 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

DEPARTMENT OF EDUCATION

2002-2003 School Year Reports

Dear School Board Members and School Personnel:

The Maine Educational Assessment (MEA) is the state's measure of student progress in achieving the challenging academic expectations adopted in 1997 in the *Learning Results*. This report of student performance in mathematics, science and technology, social studies, and visual and performing arts is the second of two reports for the 2002–2003 school year. The first report for reading, writing, and health education was released in June of 2003. In analyzing school and district performance, it is recommended that you examine both reports together.

Beginning with these 2002–2003 school reports, the MEA is converting to an electronic format for distributing results. While the Parent Report continues to be produced on paper, all other reports are distributed through a series of three CDs including

- School and District Reports that provide comprehensive summaries of results;
- Common Item Reports that will, for the first time, include a file to enable local analysis of results;
- back up copies of the Parent Report; and
- released test items, scoring guides, and student response samples.

It is hoped that this new electronic format will make the reports more easily available to teachers and the public through posting on school or district Web sites.

The 2002–2003 MEA reports complete the picture of benchmarks necessary for measuring student achievement of the *Learning Results* standards. Maine Department of Education Informational Letter #67 describes changes in the MEA design for the 2003 – 2004 school year. These changes are designed to strengthen the program's capacity for reporting individual student achievement of *Learning Results* expectations. The result will be more detailed parent and school reports of student performance. The new design will assess reading, writing, mathematics, and science in a single test administration period scheduled for March of 2004.

I look forward to working with you in support of our continuing efforts to improve the quality and effectiveness of the instructional opportunities designed to help all students achieve high standards.

Sincerely,

Susan A. Gendron

Susan A. Gendron
Commissioner

Educational Assessment School Report

ID:
School:
District:
Grade: 8
Test Date: MARCH 2003

Contents of the Report

The report is divided into six main sections including a section describing the students tested and a separate section for the results in each content area.

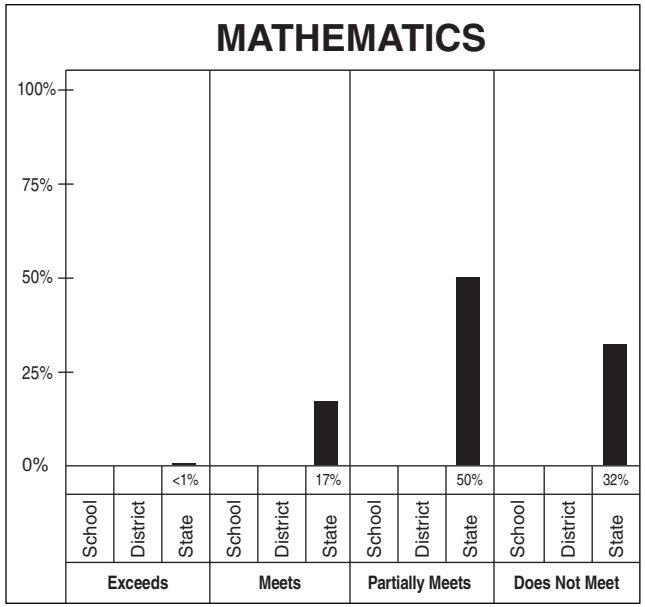
Topic	*Page*
Summary of Scores	2
Summary of Student Participation	3
Mathematics Results	4-5
Science & Technology Results	6-7
Social Studies Results	8-9
Visual & Performing Arts Results	10-11

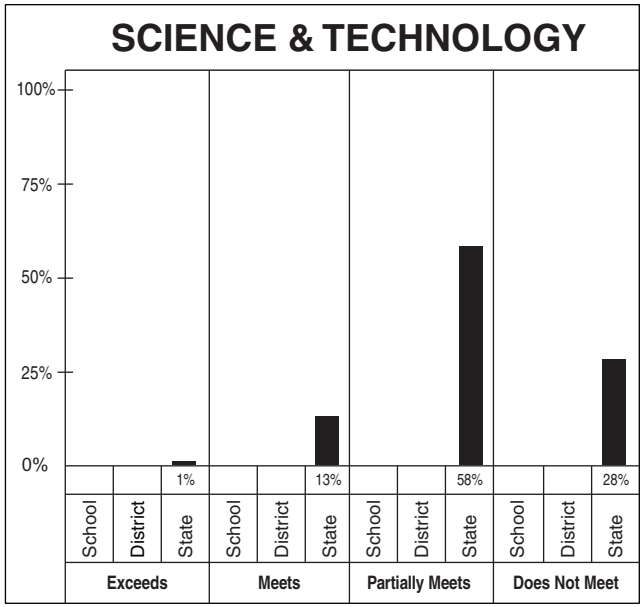
SUMMARY OF SCORES

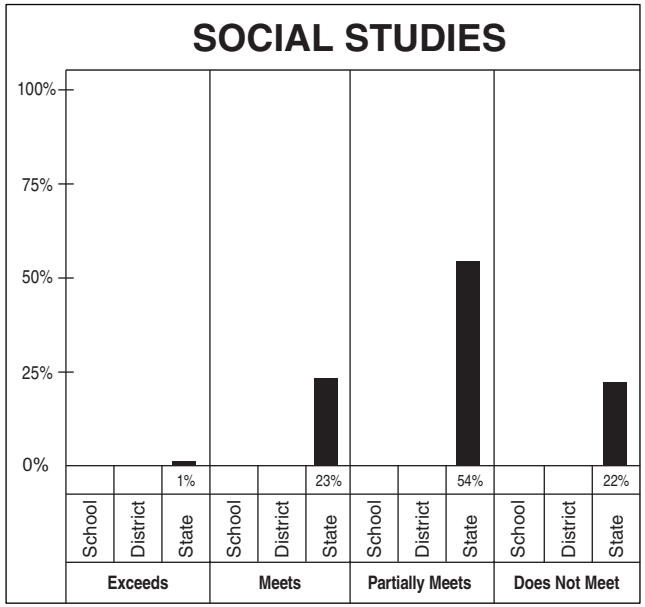
School:
District:
Grade: 8
Date: MARCH 2003

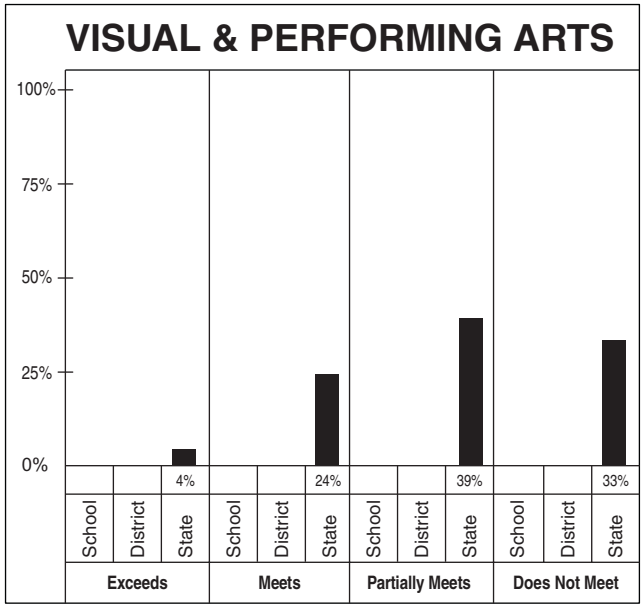
Executive Summary of School, District, and State Scores

Year	Average Performance Score		
	School	District	State
MATHEMATICS			
2000–2001			528
2001–2002			527
2002–2003			**528**
Cum. Avg.			528
SCIENCE & TECHNOLOGY			
2000–2001			529
2001–2002			528
2002–2003			**528**
Cum. Avg.			528
SOCIAL STUDIES			
2000–2001			532
2001–2002			530
2002–2003			**532**
Cum. Avg.			531
VISUAL & PERFORMING ARTS			
2000–2001			532
2001–2002			530
2002–2003			**531**
Cum. Avg.			531









SUMMARY OF STUDENT PARTICIPATION

Maine Educational Assessment

School:
District:
Grade: 8
Date: MARCH 2003

CATEGORY OF PARTICIPATION

Enrollment[1]
on the first day of testing

CONTENT AREA PARTICIPATION[2]

Mathematics

Science & Tech.

Social Studies

Visual & Perf. Arts

CATEGORY OF PARTICIPATION	Enrollment[1] School n	Enrollment[1] School %	Enrollment[1] District n	Enrollment[1] District %	Enrollment[1] State n	Enrollment[1] State %	Mathematics School n	Mathematics School %	Mathematics District n	Mathematics District %	Mathematics State n	Mathematics State %	Science & Tech. School n	Science & Tech. School %	Science & Tech. District n	Science & Tech. District %	Science & Tech. State n	Science & Tech. State %	Social Studies School n	Social Studies School %	Social Studies District n	Social Studies District %	Social Studies State n	Social Studies State %	Visual & Perf. Arts School n	Visual & Perf. Arts School %	Visual & Perf. Arts District n	Visual & Perf. Arts District %	Visual & Perf. Arts State n	Visual & Perf. Arts State %
Number of students					17367	100					17043	98					17102	98					17071	98					16981	98
Ethnicity					17367	100					17043	98					17102	98					17071	98					16981	98
White (non-Hispanic)					15820	91					15564	98					15617	99					15591	99					15531	98
Black (non-Hispanic)					238	1					230	97					233	98					229	96					211	89
Hispanic					168	1					165	98					165	98					165	98					162	96
Asian/Pacific Islander					177	1					174	98					176	99					176	99					171	97
American Indian/Alaskan Native					251	1					250	100					250	100					250	100					249	99
Multi-ethnic					493	3					490	99					492	100					491	100					490	99
Not reported					220	1					170	77					169	77					169	77					167	76
Identified disability					2541	15					2425	95					2448	96					2436	96					2405	95
Current LEP					138	1					135	98					138	100					138	100					112	81
Internet access at home					17367	100					17043	98					17102	98					17071	98					16981	98
Yes					14028	81					13989	100					14003	100					13995	100					14012	100
No					3339	19					3054	91					3099	93					3076	92					2969	89

MODE OF PARTICIPATION[3]

MODE OF PARTICIPATION[3]	Mathematics School n	Mathematics School %	Mathematics District n	Mathematics District %	Mathematics State n	Mathematics State %	Science & Tech. School n	Science & Tech. School %	Science & Tech. District n	Science & Tech. District %	Science & Tech. State n	Science & Tech. State %	Social Studies School n	Social Studies School %	Social Studies District n	Social Studies District %	Social Studies State n	Social Studies State %	Visual & Perf. Arts School n	Visual & Perf. Arts School %	Visual & Perf. Arts District n	Visual & Perf. Arts District %	Visual & Perf. Arts State n	Visual & Perf. Arts State %
Students who took the assessment without accommodations					14805	87					14850	87					14861	87					14961	88
Students who took the assessment with accommodations					2076	12					2107	12					2066	12					2020	12
Identified disability (PET/IEP)					1903	92					1938	92					1907	92					1864	92
LEP					55	3					48	2					47	2					45	2
504 plan					53	3					57	3					52	3					51	3
Other					79	4					80	4					75	4					74	4
Students recommended for participation in alternate assessment (PAAP)					162	1					145	1					144	1						
Identified disability (PET/IEP)					138	85					114	79					113	78						
LEP					17	10					24	17					24	17						
504 plan					0	0					0	0					0	0						
Other					9	6					9	6					9	6						

[1] Percents are the percentage of students enrolled in each participation category. [2] Percents are the percentage of students in the participation category who participated in the content area.
[3] Percents are the percentage of students in each content area who participated with each mode of participation.

MAINE EDUCATIONAL ASSESSMENT

MATHEMATICS RESULTS

School:
District:
Grade: 8
Date: MARCH 2003

PERFORMANCE LEVELS	STUDENTS AT EACH PERFORMANCE LEVEL					
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in mathematics. The student demonstrates exemplary knowledge of content, process, reasoning and communication skills, and problem-solving ability (scaled scores: 561–580).	2000–2001					1
	2001–2002					1
	2002–2003					**<1**
	Cumulative Average					1
Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in mathematics. The student demonstrates consistent knowledge of mathematical content, process, reasoning and communication skills, and problem-solving ability (scaled scores: 541–560).	2000–2001					19
	2001–2002					20
	2002–2003					**17**
	Cumulative Average					19
Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in mathematics. The student demonstrates partial and/or inconsistent knowledge of mathematical content, process, reasoning and communication skills, and problem-solving ability (scaled scores: 521–540).	2000–2001					44
	2001–2002					39
	2002–2003					**50**
	Cumulative Average					44
Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in mathematics. The student demonstrates limited knowledge of mathematical content, process, reasoning and communication skills, and problem-solving ability (scaled scores: 501–520).	2000–2001					35
	2001–2002					40
	2002–2003					**32**
	Cumulative Average					36

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Content	**67**					30.9	46
Application	**125**					54.2	43
Numbers and Number Sense (Standard A)	**28**					12.5	45
Computation (Standard B)	**22**					8.0	36
Data Analysis and Statistics (Standard C)	**22**					12.0	55
Probability (Standard D)	**18**					6.9	38
Geometry (Standard E)	**18**					8.5	47
Measurement (Standard F)	**22**					8.7	40
Patterns, Relations, Functions (Standard G)	**27**					12.9	48
Algebra Concepts (Standard H)	**27**					10.9	40
Discrete Mathematics (Standard I)	**8**					4.7	59

MAINE EDUCATIONAL ASSESSMENT

MATHEMATICS RESULTS
(CONTINUED)

School:
District:
Grade: 8
Date: MARCH 2003

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						49	528	17	53	31
male						51	527	18	48	34
Ethnicity										
White (non-Hispanic)						92	528	18	50	32
Black (non-Hispanic)						1	520	6	38	56
Hispanic						1	525	10	51	40
Asian/Pacific Islander						1	530	22	52	25
American Indian/Alaskan native						1	520	6	41	53
multi-ethnic						3	527	14	54	32
not reported						1	524	11	46	43
Internet access at home										
yes						83	529	19	52	29
no						17	522	9	43	48
Title 1 program										
students currently served in mathematics						2	517	2	31	67
students previously served in mathematics						2	516	1	29	70
new students currently served in reading						0	514	0	36	64
new students previously served in reading						0	516	0	33	67
Migrant										
students eligible, not served						0	523	11	45	44
students eligible, served, not tutored						1	520	6	36	57
students eligible, served, tutored						0	521	7	42	51
Gifted/talented program										
yes						4	547	73	25	1
no						96	527	15	51	34
Identified disability										
yes						13	514	2	24	74
no						87	530	20	54	26
Language minority/LEP student										
bilingual never identified LEP						0	525	16	40	44
former LEP reclassified non-LEP						0	523	14	31	54
current LEP						1	522	12	36	52
First grade in district										
pre-k or kindergarten						59	529	20	52	28
grade 1, 2, 3, or 4						16	527	17	49	34
grade 5, 6, or 7						16	525	14	47	39
grade 8						8	523	9	43	48
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
"I learn in school most of what I need to know to answer the MEA mathematics questions."					
strongly agree		32	532	29	23
agree		53	527	14	33
disagree		11	523	7	45
strongly disagree		4	520	6	52
My grades in mathematics depend mostly on					
tests and quizzes.		13	527	18	36
tests, quizzes, and homework.		59	529	19	29
journals and portfolios.		3	519	4	54
a combination of the options above.		25	527	16	34
"My knowledge of mathematics will be useful to me in my future work."					
strongly agree		55	530	22	27
agree		37	526	14	36
disagree		5	523	10	45
strongly disagree		3	521	7	51
What best describes the use of calculators in your mathematics classes?					
Calculators are used daily.		38	529	21	29
Calculators are used once or twice a week.		37	527	16	33
Calculators are used once or twice a month.		18	527	15	35
Calculators are never used.		7	524	11	41
What best describes the use of computers in your mathematics classes?					
Computers are used daily.		4	519	6	55
Computers are used once or twice a week.		8	523	12	47
Computers are used once or twice a month.		19	528	18	32
Computers are never used.		68	529	19	29
What best describes the mathematics class you are taking in the eighth grade?					
basic mathematics		22	520	4	52
advanced mathematics		14	525	14	39
pre-algebra		41	527	11	30
Algebra 1		23	538	44	12
High school career pathway					
college prep		78	530	21	25
tech prep		14	521	5	51
occupational prep		6	519	4	56
apprenticeship programs		2	516	3	70
Parent education					
did not finish high school		5	518	3	62
graduated from high school		24	523	9	44
some education after high school		26	527	13	33
college and/or advanced degree		45	532	27	21

MAINE EDUCATIONAL ASSESSMENT

SCIENCE & TECHNOLOGY RESULTS

School:
District:
Grade: 8
Date: MARCH 2003

PERFORMANCE LEVELS		STUDENTS AT EACH PERFORMANCE LEVEL				
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in science and technology. The student demonstrates exemplary knowledge of content including life, physical, and earth/space sciences *and* scientific inquiry, reasoning, and communication skills (scaled scores: 561–580).	2000–2001					1
	2001–2002					<1
	2002–2003					**1**
	Cumulative Average					1
Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in science and technology. The student demonstrates consistent knowledge of content including life, physical, and earth/space sciences *and* scientific inquiry, reasoning, and communication skills (scaled scores: 541–560).	2000–2001					16
	2001–2002					11
	2002–2003					**13**
	Cumulative Average					13
Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in science and technology. The student demonstrates partial and/or inconsistent knowledge of content including life, physical, and earth/space sciences *and* scientific inquiry, reasoning, and communication skills (scaled scores: 521–540).	2000–2001					54
	2001–2002					59
	2002–2003					**58**
	Cumulative Average					57
Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in science and technology. The student demonstrates limited knowledge of content including life, physical, and earth/space sciences *and* scientific inquiry, reasoning, and communication skills (scaled scores: 501-520).	2000–2001					29
	2001–2002					29
	2002–2003					**28**
	Cumulative Average					29

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Content	**110**					54.3	49
Classifying Life Forms (Standard A)	**7**					4.8	69
Ecology (Standard B)	**6**					1.4	23
Cells (Standard C)	**14**					8.3	59
Continuity and Change (Standard D)	**16**					8.6	54
Structure of Matter (Standard E)	**16**					6.3	39
The Earth (Standard F)	**15**					6.9	46
The Universe (Standard G)	**12**					5.3	44
Energy (Standard H)	**13**					7.7	59
Motion (Standard I)	**11**					5.1	46
Application	**82**					43.6	53
Inquiry and Problem Solving (Standard J)	**26**					15.7	60
Scientific Reasoning (Standard K)	**16**					9.1	57
Communication (Standard L)	**18**					9.7	54
Implications of Science & Technology (Standard M)	**22**					9.3	42

MAINE EDUCATIONAL ASSESSMENT

SCIENCE & TECHNOLOGY RESULTS
(CONTINUED)

School:
District:
Grade: 8
Date: MARCH 2003

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						49	528	14	58	28
male						51	529	15	59	27
Ethnicity										
White (non-Hispanic)						92	529	15	58	27
Black (non-Hispanic)						1	520	2	43	54
Hispanic						1	526	8	60	31
Asian/Pacific Islander						1	528	12	62	26
American Indian/Alaskan native						1	522	5	51	43
multi-ethnic						3	529	14	61	25
not reported						1	523	7	51	41
Internet access at home										
yes						83	529	16	59	25
no						17	524	8	52	40
Title 1 program										
students currently served in mathematics						2	521	5	42	53
students previously served in mathematics						2	520	2	40	58
new students currently served in reading						0	517	6	28	67
new students previously served in reading						0	517	0	35	65
Migrant										
students eligible, not served						0	525	8	60	32
students eligible, served, not tutored						1	521	5	46	49
students eligible, served, tutored						0	520	3	45	53
Gifted/talented program										
yes						3	544	61	38	2
no						97	528	13	59	28
Identified disability										
yes						13	517	2	34	64
no						87	530	16	62	22
Language minority/LEP student										
bilingual never identified LEP						0	523	4	52	44
former LEP reclassified non-LEP						0	521	6	46	49
current LEP						1	522	7	44	49
First grade in district										
pre-k or kindergarten						59	529	16	60	24
grade 1, 2, 3, or 4						16	528	15	57	28
grade 5, 6, or 7						16	527	11	56	33
grade 8						8	524	9	50	41
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
Which statement best describes how your science class is taught?					
We read text, answer questions, and do other activities.		30	528	14	30
We use materials to design our own labs and activities.		9	524	7	41
We have mostly lectures and demonstrations.		12	527	12	32
We have a balanced combination of the options above.		49	530	17	22
Which statement best describes how often and how long your science class meets?					
every day for forty-five minutes to an hour		66	529	15	25
on alternate days for 80-90 minutes		17	529	16	26
every day for forty-five minutes, plus a longer lab period each week		7	527	14	33
a flexible schedule depending on activities		11	525	9	37
How often do you do assignments for science or take tests where you earn points for what you have written even if it is not totally complete or correct?					
most of the time		33	529	16	25
some of the time		57	528	14	28
never		10	528	15	29
"I learn in school most of what I need to know to answer the MEA science and technology questions."					
strongly agree		11	531	21	25
agree		64	529	15	26
disagree		20	527	10	31
strongly disagree		6	525	9	37
"My knowledge of science and technology will be useful to me in my future work."					
strongly agree		27	531	21	22
agree		54	528	13	28
disagree		15	526	10	32
strongly disagree		5	523	6	40
Which courses have you taken or do you plan to take before you graduate?					
earth and space science and/or biology		24	527	11	28
the course(s) described above, plus chemistry		22	529	16	25
the course(s) described above, plus physics		24	532	25	20
a life science and physical science course		31	526	9	33
High school career pathway					
college prep		78	530	17	22
tech prep		14	523	4	40
occupational prep		6	522	4	47
apprenticeship programs		2	518	3	60
Parent education					
did not finish high school		5	519	2	54
graduated from high school		24	524	6	40
some education after high school		26	528	11	26
college and/or advanced degree		45	533	22	17

MAINE EDUCATIONAL ASSESSMENT

SOCIAL STUDIES RESULTS

School:
District:
Grade: 8
Date: MARCH 2003

PERFORMANCE LEVELS		STUDENTS AT EACH PERFORMANCE LEVEL				
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in social studies. The student demonstrates exemplary knowledge of content of major social studies concepts, consistently applies complex thinking skills, and communicates ideas clearly in all situations (scaled scores: 561–580).	2000–2001					2
	2001–2002					1
	2002–2003					**1**
	Cumulative Average					1
Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in social studies. The student demonstrates consistent knowledge of content of major social studies concepts, usually applies complex thinking skills, and communicates ideas clearly in most situations (scaled scores: 541–560).	2000–2001					25
	2001–2002					18
	2002–2003					**23**
	Cumulative Average					22
Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in social studies. The student demonstrates some knowledge of major social studies concepts, inconsistently applies complex thinking skills, and communicates ideas clearly in some situations (scaled scores: 521–540).	2000–2001					54
	2001–2002					53
	2002–2003					**54**
	Cumulative Average					54
Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in social studies. The student demonstrates limited knowledge of content of major social studies concepts, does not apply complex thinking skills, and communicates ideas clearly in few or no situations (scaled scores: 501-520).	2000–2001					20
	2001–2002					28
	2002–2003					**22**
	Cumulative Average					23

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Content	109					68.8	63
Application	82					39.4	48
Civics and Government (Standards A, B, C, and D)	44					23.9	54
Rights, Responsibilities, and Participation (Standard A)	16					9.0	56
Purpose, Types, and Fundamental Principles of Government and Constitutions (Standards B and C)	21					11.4	54
International Relations (Standard D)	7					3.5	50
History (Standards A, B, and C)	58					29.1	50
Chronology, Historical Knowledge, Concepts, and Patterns (Standards A and B)	30					15.9	53
Historical Inquiry, Analyisis, and Interpretation (Standard C)	28					13.2	47
Geography (Standards A and B)	47					28.4	60
Skills and Tools (Standard A)	22					14.7	67
Human Interaction with Environments (Standard B)	25					13.7	55
Economics (Standards A, B, C, and D)	42					26.8	64
Personal and Consumer Economics (Standard A)	17					11.6	68
Economic Systems/Cooperative Systems (Standards B and C)	17					11.1	65
International Trade and Global Interdependence (Standard D)	8					4.2	53

MAINE EDUCATIONAL ASSESSMENT

SOCIAL STUDIES RESULTS
(CONTINUED)

School:
District:
Grade: 8
Date: MARCH 2003

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						49	533	26	54	20
male						51	531	22	53	25
Ethnicity										
White (non-Hispanic)						92	532	25	54	22
Black (non-Hispanic)						1	526	13	54	33
Hispanic						1	530	22	54	25
Asian/Pacific Islander						1	534	29	55	16
American Indian/Alaskan native						1	524	8	53	39
multi-ethnic						3	532	23	56	21
not reported						1	528	17	50	33
Internet access at home										
yes						83	533	26	54	19
no						17	526	13	51	36
Title 1 program										
students currently served in mathematics						2	524	6	49	45
students previously served in mathematics						2	523	4	48	48
new students currently served in reading						0	519	9	26	66
new students previously served in reading						0	521	2	40	58
Migrant										
students eligible, not served						0	527	15	52	34
students eligible, served, not tutored						1	524	7	53	40
students eligible, served, tutored						0	524	11	42	47
Gifted/talented program										
yes						3	548	77	22	1
no						97	531	22	55	23
Identified disability										
yes						13	519	3	36	61
no						87	534	27	56	16
Language minority/LEP student										
bilingual never identified LEP						0	527	20	52	28
former LEP reclassified non-LEP						0	527	9	59	32
current LEP						1	525	10	51	39
First grade in district										
pre-k or kindergarten						59	533	26	55	19
grade 1, 2, 3, or 4						16	532	25	53	22
grade 5, 6, or 7						16	530	20	52	28
grade 8						8	527	14	51	34
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
How do you spend most of your class time in social studies?					
I work by myself.		25	530	20	26
I work in small groups.		14	528	14	31
I do some work by myself and some in small groups.		48	534	29	17
The whole class works together.		13	533	28	21
"I learn in school most of what I need to know to answer the MEA social studies questions."					
strongly agree		20	534	30	19
agree		61	532	24	21
disagree		14	530	19	25
strongly disagree		5	527	14	35
Think about a research project that you did in social studies this year. What resources did you use?					
magazines, newspapers, books, and an encyclopedia		11	527	14	33
the Internet and/or personal interviews		17	528	17	31
a combination of the options above		61	534	29	16
I did not do any research projects in social studies.		11	529	20	27
"My knowledge of social studies will be useful to me in my future work."					
strongly agree		17	533	28	23
agree		53	532	26	21
disagree		23	531	22	21
strongly disagree		7	527	13	34
How important is social studies compared to other courses or subjects that you are taking?					
very important		20	532	28	25
somewhat important		57	533	26	19
minimally important		18	530	20	24
not important		6	526	12	35
High school career pathway					
college prep		78	534	30	16
tech prep		14	525	8	38
occupational prep		6	523	7	46
apprenticeship programs		2	520	7	58
Parent education					
did not finish high school		5	521	5	54
graduated from high school		24	527	12	33
some education after high school		26	531	20	20
college and/or advanced degree		45	536	36	12

MAINE EDUCATIONAL ASSESSMENT

VISUAL & PERFORMING ARTS RESULTS

School:
District:
Grade: 8
Date: MARCH 2003

PERFORMANCE LEVELS		STUDENTS AT EACH PERFORMANCE LEVEL				
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in visual and performing arts. The student demonstrates exemplary knowledge of content and application of skills of the visual and performing arts including creative expression, cultural heritage, and criticism and aesthetics (scaled scores: 561–580).	2000–2001					4
	2001–2002					4
	2002–2003					**4**
	Cumulative Average					4
Meets the Standards—The quality of the student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in visual and performing arts. The student demonstrates consistent knowledge of content and application of skills of the visual and performing arts including creative expression, cultural heritage, and criticism and aesthetics (scaled scores: 541–560).	2000–2001					26
	2001–2002					22
	2002–2003					**24**
	Cumulative Average					24
Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in visual and performing arts. The student demonstrates partial and/or inconsistent knowledge of content and application of skills of the visual and performing arts including creative expression, cultural heritage, and criticism and aesthetics (scaled scores: 521–540).	2000–2001					41
	2001–2002					42
	2002–2003					**39**
	Cumulative Average					41
Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in visual and performing arts. The student demonstrates limited knowledge of content and application of skills of the visual and performing arts including creative expression, cultural heritage, and criticism and aesthetics (scaled scores: 501–520).	2000–2001					28
	2001–2002					32
	2002–2003					**33**
	Cumulative Average					31

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Dance	**21**					10.6	50
Music	**39**					22.1	57
Theater	**21**					10.3	49
Visual Arts	**39**					22.9	59
Creative Expression (Standard A)	**39**					21.4	55
Cultural Heritage (Standard B)	**39**					22.1	57
Criticism and Aesthetics (Standard C)	**42**					22.4	53

VISUAL & PERFORMING ARTS RESULTS
(CONTINUED)

School:
District:
Grade: 8
Date: MARCH 2003

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						49	534	33	39	28
male						51	528	23	40	37
Ethnicity										
White (non-Hispanic)						92	531	29	39	32
Black (non-Hispanic)						1	525	16	36	48
Hispanic						1	530	26	43	31
Asian/Pacific Islander						1	532	28	41	30
American Indian/Alaskan native						1	525	16	39	45
multi-ethnic						3	532	28	42	30
not reported						1	526	18	35	47
Internet access at home										
yes						83	532	31	40	30
no						17	525	16	38	46
Title 1 program										
students currently served in mathematics						2	524	12	41	48
students previously served in mathematics						2	523	10	40	50
new students currently served in reading						0	519	11	28	61
new students previously served in reading						0	521	8	33	59
Migrant										
students eligible, not served						0	526	16	34	49
students eligible, served, not tutored						1	520	8	36	56
students eligible, served, tutored						0	522	11	36	53
Gifted/talented program										
yes						4	549	69	27	4
no						96	530	27	40	34
Identified disability										
yes						13	518	7	27	66
no						87	533	31	41	27
Language minority/LEP student										
bilingual never identified LEP						0	527	21	38	42
former LEP reclassified non-LEP						0	519	6	31	64
current LEP						1	526	18	32	50
First grade in district										
pre-k or kindergarten						59	532	31	40	30
grade 1, 2, 3, or 4						16	531	27	40	33
grade 5, 6, or 7						16	529	25	38	37
grade 8						8	527	19	38	42
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
"I learn in school most of what I need to know to answer the MEA visual and performing arts questions."					
strongly agree		11	533	34	32
agree		41	530	27	34
disagree		30	532	31	29
strongly disagree		18	529	23	35
What best describes your participation in music?					
I take or took a course at school.		61	534	33	27
I have not taken a course at school.		25	526	17	43
I am involved outside of school.		9	533	34	30
My school does not offer opportunities.		5	522	14	53
What best describes your participation in visual arts?					
I take or took a course at school.		49	534	35	26
I have not taken a course at school.		32	528	21	38
I am involved outside of school.		5	530	27	36
My school does not offer opportunities.		13	528	22	39
What best describes your participation in theater?					
I take or took a course at school.		16	535	37	25
I have not taken a course at school.		54	530	26	33
I am involved outside of school.		9	535	39	28
My school does not offer opportunities.		22	529	24	38
What best describes your participation in dance?					
I take or took a course at school.		8	530	27	36
I have not taken a course at school.		40	529	24	35
I am involved outside of school.		13	534	34	27
My school does not offer opportunities.		39	532	31	30
"My knowledge of visual and performing arts will be useful to me in my future work."					
strongly agree		16	535	38	27
agree		41	531	28	33
disagree		29	531	27	32
strongly disagree		14	528	20	37
High school career pathway					
college prep		78	534	33	26
tech prep		14	523	13	49
occupational prep		6	522	12	53
apprenticeship programs		2	520	9	57
Parent education					
did not finish high school		5	520	9	60
graduated from high school		24	526	17	44
some education after high school		26	530	24	33
college and/or advanced degree		45	537	39	21

Common Item Class Report

MATHEMATICS

Grade 8

Code:
District:
School:
Class:
Date: March 2003
Group Size: 1

	Item Number	1	2	3	4	5	9	10	11	12	13	16	17	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	42	43	Points Earned (48 Max. Points)	Scaled Score	Performance Level
	Content Standard and Performance Indicator	A1	A3	A2	A3	I2	C2	D4	E2	G2	H5	G1	F3	E1	H1	B2	H2	F2	A2	A1	D1	D1	D4	E3	E2	H5	G3	A3	H2	I1	B2	C1			
	Item Type	MC	MC	MC	MC	MC	SA	SA	SA	SA	SA	CR	CR	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	CR	CR			
	Correct MC Response	C	B	A	B	D								D	C	D	A	B	C	A	B	D	D	A	A	B	C	C	D	B					
Name	Total Possible Points	1	1	1	1	1	2	2	2	2	2	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	4			

Item Number	1	2	3	4	5	9	10	11	12	13	16	17	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	42	43
Percent Correct/Avg. Score: Class																															
Percent Correct/Avg. Score: School																															
Percent Correct/Avg. Score: District																															
Percent Correct/Avg. Score: State	66	74	42	49	82	1.7	0.7	0.9	1.1	0.3	1.8	1.3	84	81	52	56	67	55	50	34	47	34	53	71	45	76	57	65	70	1.6	2.3

Common Item Class Report

SCIENCE & TECHNOLOGY

Grade 8

Code:
District:
School:
Class:
Date: March 2003
Group Size: 1

	Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	40	41	Points Earned (48 Max. Points)	Scaled Score	Performance Level
	Content Standard and Performance Indicator	C3	L4	C3	J2	D3	K1	L4	A3	L4	K9	D2	F4	G1	K1	D4	I3	H6	I2	D4	F3	H6	J4	G1	M2	F6	C4	D2	I1	M4	E5			
	Item Type	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	CR	CR	CR	CR	MC	MC	MC	MC	CR	CR			
	Correct MC Response	D	C	D	B	D	A	B	D	C	D	C	C	A	B	D	A	B	B	C	A					D	B	C	A					
Name	Total Possible Points	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	4	4	4	1	1	1	1	4	4			

	Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	40	41
Percent Correct/Avg. Score: Class																															
Percent Correct/Avg. Score: School																															
Percent Correct/Avg. Score: District																															
Percent Correct/Avg. Score: State	90	77	41	61	77	68	55	81	78	68	68	65	69	87	80	45	28	77	30	65	1.8	1.4	1.4	1.1	89	55	71	75	1.6	0.7

Common Item Class Report

SOCIAL STUDIES

Grade 8

Code:
District:
School:
Class:
Date: March 2003
Group Size: 1

	Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	40	41	Points Earned (48 Max. Points)	Scaled Score	Performance Level
	Content Standard and Performance Indicator	HC5	CC1	ED2	HB2	EB1	CC2	HA2	HC2	EC2	CB1	HB3	HA2	CA1	EB5	GA1	CB4	GA2	CD1	EA2	GB2	EC2	HC2	GB3	CA1	EA3	HB3	GB3	CA3	GB1	HB2			
	Item Type	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	CR	CR	CR	CR	MC	MC	MC	MC	CR	CR			
	Correct MC Response	A	D	C	B	A	B	A	B	A	B	C	B	A	D	B	D	B	D	C	B					D	A	C	B					
Name	Total Possible Points	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	4	4	4	1	1	1	1	4	4			

	Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	40	41
	Percent Correct/Avg. Score: Class																														
	Percent Correct/Avg. Score: School																														
	Percent Correct/Avg. Score: District																														
	Percent Correct/Avg. Score: State	79	71	61	42	72	62	66	86	53	60	62	40	67	65	54	79	77	53	54	52	2.1	1.4	1.9	1.8	87	59	59	50	2.1	1.7

Important Information for Parents/Guardians Grade 8 Assessment March 2003 Administration

STATE OF MAINE
DEPARTMENT OF EDUCATION
23 State House Station
Augusta, ME 04333
September 2003

Susan A. Gendron
COMMISSIONER

Dear Parents and Guardians:

In March 2003, students across the state participated in the Maine Educational Assessment (MEA) tests in mathematics, science and technology, and social studies; this is a report of these results. A report was sent to you in June 2003 with the results of the MEA assessments in English language arts—reading and writing. While the MEA has been administered to Maine students for the past 18 years, it is now designed to measure the progress of schools and students in achieving *Learning Results* expectations adopted by the Legislature in 1997. The MEA is aligned with the content standards described in Maine's *Learning Results,* which are available for your review at the following address: http://www.state.me.us/education/lres/homepage.htm.

The MEA results are reported in four performance levels that describe the quality of a student's responses on each of the content area tests. While many students do not yet meet the *Learning Results* standards, keep in mind that these are new challenging standards for student performance. Our long-term goal is for all students to meet the standards so that Maine youth will be among the best educated in the world.

To fairly assess student progress in achieving *Learning Results*, Maine has chosen to use multiple local measures along with the MEA to create a more complete picture of a student's achievement. The MEA, as one measure of student performance, should be viewed with local measures of achievement, such as portfolios of student work, performance exhibitions, and end-of-term grades. The staff at your school will be able to provide further information about your student's performance on the MEA as well as the school's performance. I encourage you to contact the school to begin a conversation that will support your child's success.

Sincerely,

Susan A. Gendron
Commissioner

Information on Maine's *Learning Results*

- The *Learning Results* were developed in eight content areas by thousands of Maine citizens.
- The MEA was rewritten by hundreds of Maine teachers to align with the *Learning Results.*
- Setting MEA performance standards based on the quality of student work was completed by hundreds of Maine teachers and citizens.
- For a copy of Maine's *Learning Results,* either call 624-6621 or find them on-line at http://www.state.me.us/education/lres/homepage.htm.

Performance Levels and Score Ranges

On this assessment, results are reported as four performance levels using scaled scores that range from 501 to 580. **The text below describes the quality of student work for each performance level.**

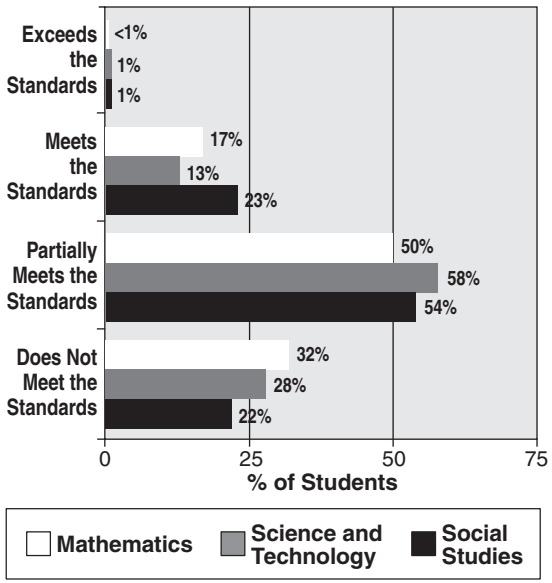
❒ **Exceeds the Standards (561 to 580)**
The student's work demonstrates exemplary accomplishment of content knowledge, analysis, problem-solving, and communication skills.

❒ **Meets the Standards (541 to 560)**
The student's work demonstrates consistent accomplishment of content knowledge, analysis, problem-solving, and communication skills.

❒ **Partially Meets the Standards (521 to 540)**
The student's work demonstrates inconsistent accomplishment of content knowledge, analysis, problem-solving, and communication skills.

❒ **Does Not Meet the Standards (501 to 520)**
The student's work demonstrates limited command of content knowledge, analysis, problem-solving, and communication skills.

Maine State MEA Summary Results March 2003 Administration



Student	Grade	School	District
	8		

Content Area	Performance Level	Score	This Student's Performance Levels and Scores
Mathematics			
Science & Technology			
Social Studies			

Does Not Meet the Standards | Partially Meets the Standards | Meets the Standards | Exceeds the Standards

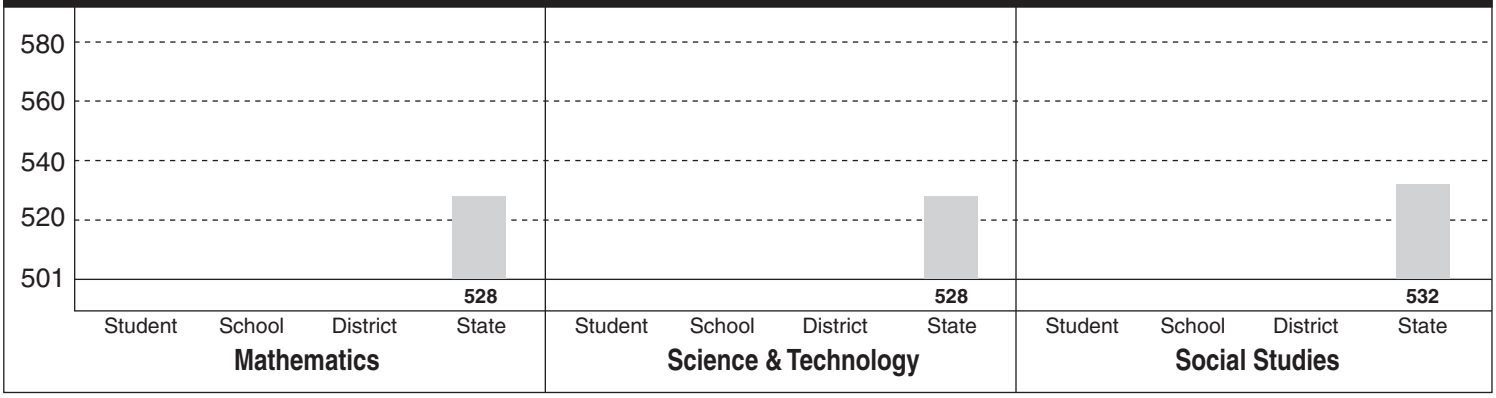
501 520 540 560 580

Testing Incomplete (TI):
Student failed to attempt one or more sessions.

See reverse side for description of performance levels and state summary results.

The diamond (◆) represents the student's score. The bar (▬) surrounding the score represents the probable range of scores for the student if he or she were to be tested many times. This statistic is called the standard error of measurement.

How this Student's Performance Compared to Average Scores from School, District, and State



This Student's Performance in Content Area Subcategories

Content Areas	Content Area Subcategories	Student's Score Compared with Meeting the State Standards: Weaker	Meets the Standards	Stronger
Mathematics	Content			
	Application			
Science & Technology	Content			
	Application			
Social Studies	Content			
	Application			

Definitions of Content Area Subcategories

Content: Refers to a student's knowledge and conceptual understanding of the content area and of the procedures necessary to acquire new learning.

Application: Refers to a student's use of knowledge and to his/her conceptual and procedural understanding for applying knowledge in the content area through reasoning, inquiry, communicating ideas, and/or solving problems.

Scores for Content and Application are derived from particular subsets of items in each content area that emphasize those types of knowledge.

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 **Writing:**
Date: 12/02 **Reading:**

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Maine
Educational
Assessment

Name:
School:
District:

Performance Levels — Scaled Scores

Grade: 8 Writing:
Date: 12/02 Reading:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

DEPARTMENT OF EDUCATION

2002-2003 School Year Reports

Dear School Board Members and School Personnel:

The Maine Educational Assessment (MEA) is the state's measure of student progress in achieving the challenging academic expectations adopted in 1997 in the *Learning Results*. This report of student performance in mathematics, science and technology, social studies, and visual and performing arts is the second of two reports for the 2002–2003 school year. The first report for reading, writing, and health education was released in June of 2003. In analyzing school and district performance, it is recommended that you examine both reports together.

Beginning with these 2002–2003 school reports, the MEA is converting to an electronic format for distributing results. While the Parent Report continues to be produced on paper, all other reports are distributed through a series of three CDs including

- School and District Reports that provide comprehensive summaries of results;
- Common Item Reports that will, for the first time, include a file to enable local analysis of results;
- back up copies of the Parent Report; and
- released test items, scoring guides, and student response samples.

It is hoped that this new electronic format will make the reports more easily available to teachers and the public through posting on school or district Web sites.

The 2002–2003 MEA reports complete the picture of benchmarks necessary for measuring student achievement of the *Learning Results* standards. Maine Department of Education Informational Letter #67 describes changes in the MEA design for the 2003 – 2004 school year. These changes are designed to strengthen the program's capacity for reporting individual student achievement of *Learning Results* expectations. The result will be more detailed parent and school reports of student performance. The new design will assess reading, writing, mathematics, and science in a single test administration period scheduled for March of 2004.

I look forward to working with you in support of our continuing efforts to improve the quality and effectiveness of the instructional opportunities designed to help all students achieve high standards.

Sincerely,

Susan A. Gendron

Susan A. Gendron
Commissioner

Educational Assessment School Report

ID:

School:

District:

Grade: 11

Test Date: MARCH 2003

Contents of the Report

The report is divided into six main sections including a section describing the students tested and a separate section for the results in each content area.

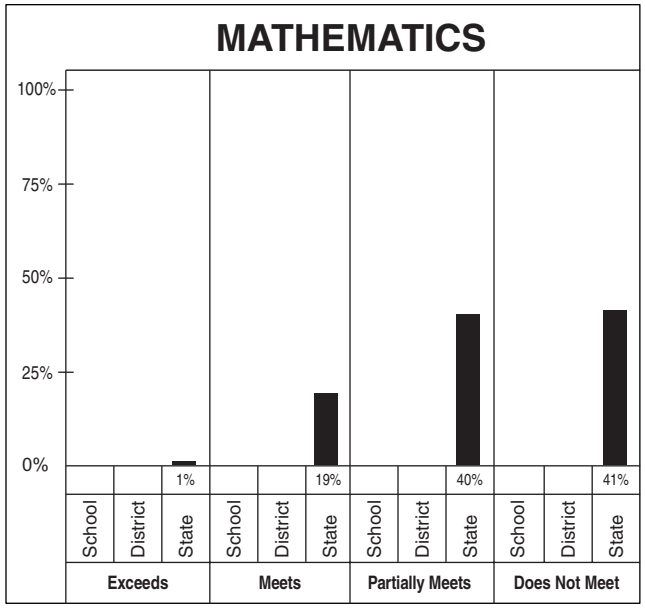
Topic	*Page*
Summary of Scores	2
Summary of Student Participation	3
Mathematics Results	4-5
Science & Technology Results	6-7
Social Studies Results	8-9
Visual & Performing Arts Results	10-11

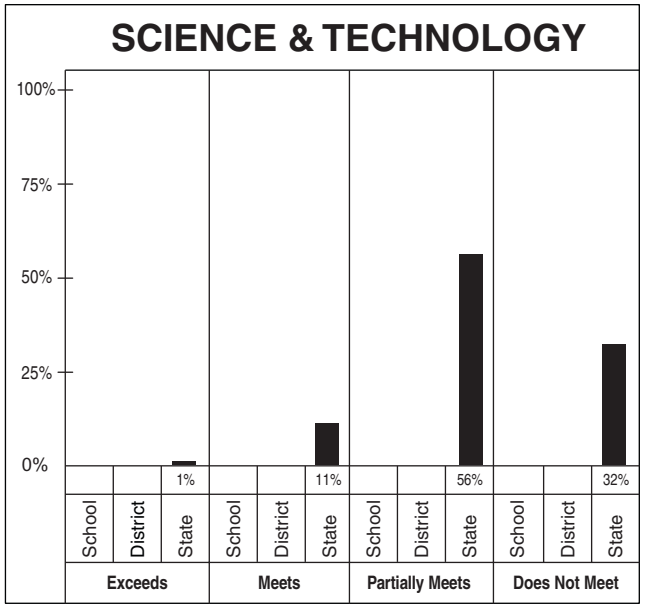
SUMMARY OF SCORES

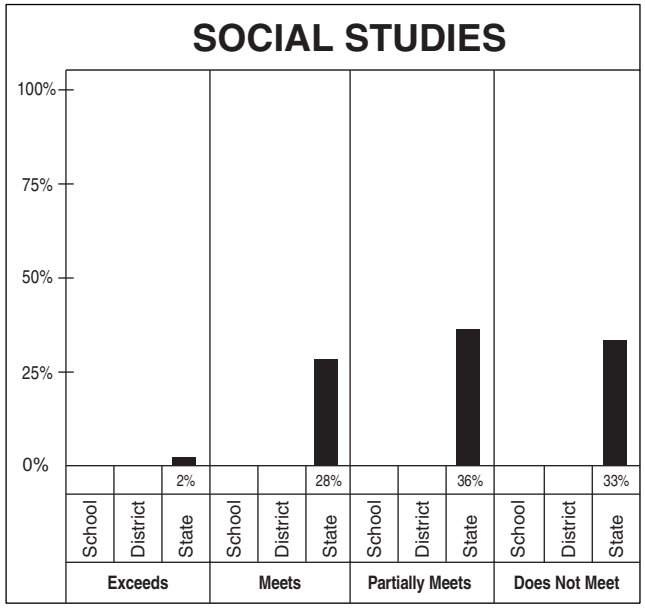
School:
District:
Grade: 11
Date: MARCH 2003

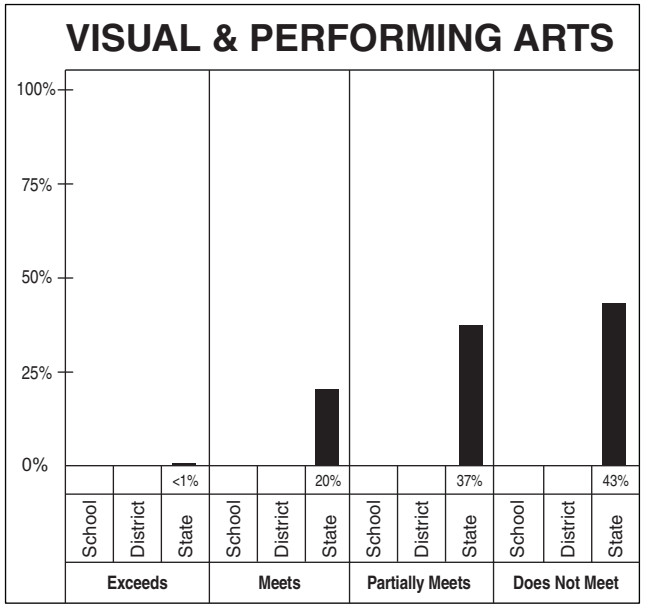
Executive Summary of School, District, and State Scores

Year	Average Performance Score		
	School	District	State
MATHEMATICS			
2000–2001			528
2001–2002			528
2002–2003			**527**
Cum. Avg.			528
SCIENCE & TECHNOLOGY			
2000–2001			527
2001–2002			527
2002–2003			**527**
Cum. Avg.			527
SOCIAL STUDIES			
2000–2001			530
2001–2002			530
2002–2003			**530**
Cum. Avg.			530
VISUAL & PERFORMING ARTS			
2000–2001			527
2001–2002			525
2002–2003			**525**
Cum. Avg.			526









SUMMARY OF STUDENT PARTICIPATION

School:
District:
Grade: 11
Date: MARCH 2003

CATEGORY OF PARTICIPATION

Enrollment[1]
on the first day of testing

CONTENT AREA PARTICIPATION[2]

CATEGORY OF PARTICIPATION	Enrollment[1] on the first day of testing						Mathematics						Science & Tech.						Social Studies						Visual & Perf. Arts					
	School		District		State		School		District		State		School		District		State		School		District		State		School		District		State	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Number of students					15855	100					15202	96					15330	97					15300	96					15193	96
Ethnicity					15855	100					15202	96					15330	97					15300	96					15193	96
White (non-Hispanic)					14422	91					14076	98					14185	98					14152	98					14052	97
Black (non-Hispanic)					172	1					160	93					170	99					169	98					169	98
Hispanic					142	1					131	92					137	96					135	95					132	93
Asian/Pacific Islander					169	1					165	98					166	98					166	98					167	99
American Indian/Alaskan Native					139	1					132	95					133	96					132	95					132	95
Multi-ethnic					309	2					297	96					298	96					301	97					299	97
Not reported					502	3					241	48					241	48					245	49					242	48
Identified disability					1641	10					1551	95					1569	96					1558	95					1540	94
Current LEP					108	1					77	71					90	83					90	83					90	83
Internet access at home					15855	100					15202	96					15330	97					15300	96					15193	96
Yes					12574	79					12545	100					12545	100					12548	100					12559	100
No					3281	21					2657	81					2785	85					2752	84					2634	80

MODE OF PARTICIPATION[3]

MODE OF PARTICIPATION[3]	Mathematics						Science & Tech.						Social Studies						Visual & Perf. Arts					
	School		District		State		School		District		State		School		District		State		School		District		State	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Students who took the assessment without accommodations					13925	92					14035	92					14024	92					14034	92
Students who took the assessment with accommodations					1178	8					1207	8					1182	8					1159	8
Identified disability (PET/IEP)					1109	94					1137	94					1114	94					1091	94
LEP					9	1					9	1					9	1					9	1
504 plan					26	2					27	2					27	2					26	2
Other					37	3					37	3					35	3					36	3
Students recommended for participation in alternate assessment (PAAP)					99	1					88	1					94	1						
Identified disability (PET/IEP)					80	81					73	83					71	76						
LEP					1	1					1	1					1	1						
504 plan					1	1					1	1					1	1						
Other					18	18					14	16					22	23						

[1] Percents are the percentage of students enrolled in each participation category. [2] Percents are the percentage of students in the participation category who participated in the content area.
[3] Percents are the percentage of students in each content area who participated with each mode of participation.

MAINE EDUCATIONAL ASSESSMENT

MATHEMATICS RESULTS

School:
District:
Grade: 11
Date: MARCH 2003

PERFORMANCE LEVELS	STUDENTS AT EACH PERFORMANCE LEVEL					
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in mathematics. The student demonstrates exemplary knowledge of content, process, reasoning and communication skills, and problem-solving ability (scaled scores: 561–580).	2000–2001					1
	2001–2002					1
	2002–2003					**1**
	Cumulative Average					1
Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in mathematics. The student demonstrates consistent knowledge of mathematical content, process, reasoning and communication skills, and problem-solving ability (scaled scores: 541–560).	2000–2001					22
	2001–2002					18
	2002–2003					**19**
	Cumulative Average					20
Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in mathematics. The student demonstrates partial and/or inconsistent knowledge of mathematical content, process, reasoning and communication skills, and problem-solving ability (scaled scores: 521–540).	2000–2001					39
	2001–2002					43
	2002–2003					**40**
	Cumulative Average					41
Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in mathematics. The student demonstrates limited knowledge of mathematical content, process, reasoning and communication skills, and problem-solving ability (scaled scores: 501–520).	2000–2001					38
	2001–2002					38
	2002–2003					**41**
	Cumulative Average					39

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Content	**58**					23.1	40
Application	**133**					47.8	36
Numbers and Number Sense (Standard A)	**15**					5.5	37
Computation (Standard B)	**16**					8.1	51
Data Analysis and Statistics (Standard C)	**22**					8.2	37
Probability (Standard D)	**18**					4.9	27
Geometry (Standard E)	**30**					10.7	36
Measurement (Standard F)	**17**					5.7	34
Patterns, Relations, Functions (Standard G)	**26**					10.2	39
Algebra Concepts (Standard H)	**35**					12.8	37
Discrete Mathematics (Standard I)	**12**					4.8	40

MAINE EDUCATIONAL ASSESSMENT

MATHEMATICS RESULTS
(CONTINUED)

School:
District:
Grade: 11
Date: MARCH 2003

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						49	526	18	42	40
male						51	527	22	38	41
Ethnicity										
White (non-Hispanic)						93	527	20	40	40
Black (non-Hispanic)						1	516	6	20	74
Hispanic						1	521	10	31	58
Asian/Pacific Islander						1	529	25	37	38
American Indian/Alaskan native						1	521	9	34	56
multi-ethnic						2	528	20	44	36
not reported						1	522	15	28	57
Internet access at home										
yes						84	528	22	42	37
no						16	520	8	30	62
Migrant										
students eligible, not served						0	525	12	41	47
students eligible, served, not tutored						1	517	4	27	68
students eligible, served, tutored						0	513	0	27	73
Gifted/talented program										
yes						2	544	66	30	4
no						98	526	19	40	41
Identified disability										
yes						9	512	2	13	85
no						91	528	21	43	36
Language minority/LEP student										
bilingual never identified LEP						0	531	44	22	33
former LEP reclassified non-LEP						0	525	20	20	60
current LEP						1	514	4	20	76
First grade in district										
before grade 9						76	528	21	42	38
grade 9						13	525	17	37	45
grade 10						4	524	16	34	50
grade 11						8	522	14	30	56
College prep										
yes						71	531	27	46	27
no						29	517	3	27	70
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
"My knowledge of mathematics will be useful to me in my future work."					
strongly agree		36	530	28	33
agree		46	526	17	41
disagree		12	524	12	47
strongly disagree		6	521	10	57
"I learn in school most of what I need to know to answer the MEA mathematics questions."					
strongly agree		18	536	46	24
agree		49	528	20	34
disagree		22	522	6	52
strongly disagree		12	518	3	67
What mathematics courses will you complete before you graduate?					
Algebra I and Geometry		14	516	2	75
Algebra I, Geometry, and Algebra II		31	523	6	47
all of the above, plus Advanced Mathematics		46	536	38	16
none of the above		9	514	2	81
What best describes the use of calculators in your mathematics classes?					
Calculators are used daily.		64	529	24	35
Calculators are used once or twice a week.		23	525	14	45
Calculators are used once or twice a month.		7	522	10	54
Calculators are never used.		5	518	7	66
What best describes the use of computers in your mathematics classes?					
Computers are used daily.		5	518	10	66
Computers are used once or twice a week.		6	521	10	60
Computers are used once or twice a month.		14	528	22	39
Computers are never used.		75	528	21	37
High school career pathway					
college prep		74	531	27	28
tech prep		19	517	3	67
occupational prep		6	515	2	75
apprenticeship programs		1	512	2	85
Hours worked at a part-time job during school week					
do not work part-time during school week		51	528	23	38
8 hours or fewer		19	528	22	36
9–21 hours		27	525	14	44
more than 21 hours		3	518	7	66
Parent education					
did not finish high school		4	516	5	71
graduated from high school		25	522	9	53
some education after high school		27	526	16	42
college and/or advanced degree		44	532	31	26

MAINE EDUCATIONAL ASSESSMENT

SCIENCE & TECHNOLOGY RESULTS

School:
District:
Grade: 11
Date: MARCH 2003

PERFORMANCE LEVELS	STUDENTS AT EACH PERFORMANCE LEVEL					
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in science and technology. The student demonstrates exemplary knowledge of content including life, physical, and earth/space sciences *and* scientific inquiry, reasoning, and communication skills (scaled scores: 561–580).	2000–2001					<1
	2001–2002					<1
	2002–2003					**1**
	Cumulative Average					<1
Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in science and technology. The student demonstrates consistent knowledge of content including life, physical, and earth/space sciences *and* scientific inquiry, reasoning, and communication skills (scaled scores: 541–560).	2000–2001					8
	2001–2002					9
	2002–2003					**11**
	Cumulative Average					9
Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in science and technology. The student demonstrates partial and/or inconsistent knowledge of content including life, physical, and earth/space sciences *and* scientific inquiry, reasoning, and communication skills (scaled scores: 521–540).	2000–2001					64
	2001–2002					60
	2002–2003					**56**
	Cumulative Average					60
Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in science and technology. The student demonstrates limited knowledge of content including life, physical, and earth/space sciences *and* scientific inquiry, reasoning, and communication skills (scaled scores: 501-520).	2000–2001					28
	2001–2002					30
	2002–2003					**32**
	Cumulative Average					30

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Content	**126**					55.9	44
Classifying Life Forms (Standard A)	**11**					5.4	49
Ecology (Standard B)	**10**					5.1	51
Cells (Standard C)	**17**					7.0	41
Continuity and Change (Standard D)	**8**					4.1	51
Structure of Matter (Standard E)	**19**					8.2	43
The Earth (Standard F)	**19**					7.7	41
The Universe (Standard G)	**11**					4.8	44
Energy (Standard H)	**14**					6.7	48
Motion (Standard I)	**17**					7.1	42
Application	**66**					34.4	52
Inquiry and Problem Solving (Standard J)	**17**					8.8	52
Scientific Reasoning (Standard K)	**4**					2.6	65
Communication (Standard L)	**23**					10.8	47
Implications of Science & Technology (Standard M)	**22**					12.3	56

MAINE EDUCATIONAL ASSESSMENT

SCIENCE & TECHNOLOGY RESULTS
(CONTINUED)

School:
District:
Grade: 11
Date: MARCH 2003

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						49	527	9	58	32
male						51	528	15	54	32
Ethnicity										
White (non-Hispanic)						93	527	12	56	32
Black (non-Hispanic)						1	520	4	36	60
Hispanic						1	523	7	42	51
Asian/Pacific Islander						1	529	15	53	31
American Indian/Alaskan native						1	521	4	50	46
multi-ethnic						2	530	19	53	28
not reported						1	525	13	46	41
Internet access at home										
yes						83	528	13	58	29
no						17	522	5	46	49
Migrant										
students eligible, not served						0	528	7	57	36
students eligible, served, not tutored						1	520	0	44	56
students eligible, served, tutored						0	522	0	58	42
Gifted/talented program										
yes						2	542	47	48	4
no						98	527	11	56	33
Identified disability										
yes						10	516	1	21	77
no						90	528	13	60	27
Language minority/LEP student										
bilingual never identified LEP						0	526	11	56	33
former LEP reclassified non-LEP										
current LEP						0	520	0	36	64
First grade in district										
before grade 9						76	528	13	57	30
grade 9						13	526	11	55	35
grade 10						4	525	10	48	41
grade 11						8	523	7	49	44
College prep										
yes						71	531	17	63	20
no						29	520	2	40	58
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
Which statement best describes how often and how long your science class meets?					
every day for forty-five minutes to an hour		26	528	13	30
alternate days for eighty to ninety minutes		51	527	10	32
every day for forty-five minutes, plus a longer lab period each week		16	532	21	19
a flexible schedule depending on the activities		7	520	5	57
How often do you do science assignments or take tests where you earn points for what you have written even if it is not totally complete or correct?					
most of the time		38	530	17	23
some of the time		48	527	10	33
never		14	524	8	41
"I learn in school most of what I need to know to answer the MEA science and technology questions."					
strongly agree		7	534	31	21
agree		47	530	16	24
disagree		33	525	6	38
strongly disagree		13	522	4	51
Which courses have you taken or do you plan to take before you graduate?					
earth and space science and/or biology		13	521	2	55
the course(s) described above, plus chemistry		29	527	9	28
the course(s) described above, plus physics		38	533	22	17
physical science and biology		20	522	4	48
"My knowledge of science and technology will be useful to me in my future work."					
strongly agree		23	532	24	20
agree		49	527	10	31
disagree		21	525	7	38
strongly disagree		7	521	4	52
High school career pathway					
college prep		74	531	17	20
tech prep		19	520	1	57
occupational prep		6	519	1	60
apprenticeship programs		1	517	2	74
Hours worked at part-time job during school week					
do not work part-time during school week		51	529	15	29
8 hours or fewer		18	528	14	28
9-21 hours		27	525	7	36
more than 21 hours		3	520	4	54
Parent education					
did not finish high school		4	519	2	63
graduated from high school		25	523	5	45
some education after high school		27	527	9	31
college and/or advanced degree		44	532	20	19

MAINE EDUCATIONAL ASSESSMENT

SOCIAL STUDIES RESULTS

School:
District:
Grade: 11
Date: MARCH 2003

PERFORMANCE LEVELS		STUDENTS AT EACH PERFORMANCE LEVEL				
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in social studies. The student demonstrates exemplary knowledge of content of major social studies concepts, consistently applies complex thinking skills, and communicates ideas clearly in all situations (scaled scores: 561–580).	2000–2001					1
	2001–2002					1
	2002–2003					**2**
	Cumulative Average					1
Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in social studies. The student demonstrates consistent knowledge of content of major social studies concepts, usually applies complex thinking skills, and communicates ideas clearly in most situations (scaled scores: 541–560).	2000–2001					21
	2001–2002					24
	2002–2003					**28**
	Cumulative Average					24
Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in social studies. The student demonstrates some knowledge of major social studies concepts, inconsistently applies complex thinking skills, and communicates ideas clearly in some situations (scaled scores: 521–540).	2000–2001					49
	2001–2002					46
	2002–2003					**36**
	Cumulative Average					44
Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in social studies. The student demonstrates limited knowledge of content of major social studies concepts, does not apply complex thinking skills, and communicates ideas clearly in few or no situations (scaled scores: 501-520).	2000–2001					29
	2001–2002					30
	2002–2003					**33**
	Cumulative Average					31

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Content	96					61.2	64
Application	96					43.4	45
Civics and Government (Standards A, B, C, and D)	49					25.5	52
Rights, Responsibilities, and Participation (Standard A)	15					7.4	49
Purpose, Types, and Fundamental Principles of Government and Constitutions (Standards B and C)	30					15.8	53
International Relations (Standard D)	4					2.3	58
History (Standards A, B, and C)	56					26.5	47
Chronology, Historical Knowledge, Concepts, and Patterns (Standards A and B)	48					22.3	46
Historical Inquiry, Analyisis, and Interpretation (Standard C)	8					4.2	53
Geography (Standards A and B)	42					26.1	62
Skills and Tools (Standard A)	23					14.4	63
Human Interaction with Environments (Standard B)	19					11.7	62
Economics (Standards A, B, C, and D)	45					26.5	59
Personal and Consumer Economics (Standard A)	19					11.6	61
Economic Systems/Cooperative Systems (Standards B and C)	20					11.0	55
International Trade and Global Interdependence (Standard D)	6					3.8	63

MAINE EDUCATIONAL ASSESSMENT

SOCIAL STUDIES RESULTS
(CONTINUED)

School:
District:
Grade: 11
Date: MARCH 2003

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						49	531	31	38	31
male						51	530	31	34	35
Ethnicity										
White (non-Hispanic)						93	531	31	36	33
Black (non-Hispanic)						1	523	17	31	53
Hispanic						1	524	20	34	47
Asian/Pacific Islander						1	533	38	35	27
American Indian/Alaskan native						1	522	16	31	53
multi-ethnic						2	533	37	35	27
not reported						1	525	23	28	48
Internet access at home										
yes						84	532	34	37	30
no						16	523	17	31	52
Migrant										
students eligible, not served						0	532	38	38	25
students eligible, served, not tutored						1	521	11	34	55
students eligible, served, tutored						0	521	4	46	50
Gifted/talented program										
yes						2	549	80	15	5
no						98	530	30	36	34
Identified disability										
yes						9	512	4	15	81
no						91	532	34	38	28
Language minority/LEP student										
bilingual never identified LEP						0	537	67	11	22
former LEP reclassified non-LEP										
current LEP						0	520	2	43	55
First grade in district										
before grade 9						76	532	33	37	31
grade 9						13	529	28	35	37
grade 10						4	527	25	34	41
grade 11						8	525	21	34	46
College prep										
yes						71	536	41	38	20
no						29	519	8	31	61
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
"I learn in school most of what I need to know to answer the MEA social studies questions."					
strongly agree		14	535	44	25
agree		55	532	33	29
disagree		23	528	24	38
strongly disagree		8	521	14	56
Think about a research project that you did in social studies this year. What resources did you use?					
magazines, newspapers, books, and an encyclopedia		10	526	23	45
the Internet and/or personal interviews		12	525	21	48
a combination of the options above		65	533	36	26
I did not do any research projects in social studies.		13	527	25	41
What best describes your social studies class?					
I work alone.		16	529	29	39
I work collaboratively with other students.		12	524	17	50
I do a combination of the options above.		59	533	35	27
The whole class works together.		12	530	30	36
"My knowledge of social studies will be useful to me in my future work."					
strongly agree		13	535	44	26
agree		47	532	35	28
disagree		30	529	25	36
strongly disagree		10	522	14	52
How often do you do social studies assignments or take tests where you earn points for what you have written even if it is not completely correct?					
most of the time		42	533	36	28
some of the time		44	530	29	35
never		14	528	26	38
High school career pathway					
college prep		74	536	41	20
tech prep		19	519	7	61
occupational prep		6	517	7	65
apprenticeship programs		1	513	7	77
Hours worked at part-time job during school week					
do not work part-time during school week		51	532	35	30
8 hours or fewer		18	533	35	28
9-21 hours		27	528	24	37
more than 21 hours		3	520	11	59
Parent education					
did not finish high school		4	517	8	66
graduated from high school		25	524	17	46
some education after high school		27	530	27	32
college and/or advanced degree		44	537	46	19

MAINE EDUCATIONAL ASSESSMENT

VISUAL & PERFORMING ARTS RESULTS

School:
District:
Grade: 11
Date: MARCH 2003

PERFORMANCE LEVELS		STUDENTS AT EACH PERFORMANCE LEVEL				
		School		District		State
		N	%	N	%	%
Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in visual and performing arts. The student demonstrates exemplary knowledge of content and application of skills of the visual and performing arts including creative expression, cultural heritage, and criticism and aesthetics (scaled scores: 561–580).	2000–2001					1
	2001–2002					<1
	2002–2003					**<1**
	Cumulative Average					<1
Meets the Standards—The quality of the student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in visual and performing arts. The student demonstrates consistent knowledge of content and application of skills of the visual and performing arts including creative expression, cultural heritage, and criticism and aesthetics (scaled scores: 541–560).	2000–2001					24
	2001–2002					21
	2002–2003					**20**
	Cumulative Average					22
Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in visual and performing arts. The student demonstrates partial and/or inconsistent knowledge of content and application of skills of the visual and performing arts including creative expression, cultural heritage, and criticism and aesthetics (scaled scores: 521–540).	2000–2001					37
	2001–2002					38
	2002–2003					**37**
	Cumulative Average					37
Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in visual and performing arts. The student demonstrates limited knowledge of content and application of skills of the visual and performing arts including creative expression, cultural heritage, and criticism and aesthetics (scaled scores: 501–520).	2000–2001					38
	2001–2002					41
	2002–2003					**43**
	Cumulative Average					41

Learning Results Content Standards	Number of Points Possible	Average Points Attained (Number and Percent)					
		School		District		State	
		N	%	N	%	N	%
Dance	**22**					11.8	54
Music	**34**					16.9	50
Theater	**23**					12.0	52
Visual Arts	**41**					22.1	54
Creative Expression (Standard A)	**43**					22.3	52
Cultural Heritage (Standard B)	**34**					16.8	49
Criticism and Aesthetics (Standard C)	**43**					23.8	55

VISUAL & PERFORMING ARTS RESULTS
(CONTINUED)

School:
District:
Grade: 11
Date: MARCH 2003

Reporting Categories	School					State				
	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Partially Meets the Standards	% Does Not Meet the Standards
Gender										
female						49	528	25	40	35
male						51	523	16	35	50
Ethnicity										
White (non-Hispanic)						93	525	20	38	42
Black (non-Hispanic)						1	520	12	29	59
Hispanic						1	522	20	27	53
Asian/Pacific Islander						1	527	25	36	39
American Indian/Alaskan native						1	519	13	26	61
multi-ethnic						2	529	28	38	34
not reported						1	522	16	30	54
Internet access at home										
yes						84	526	22	38	40
no						16	520	10	32	58
Migrant										
students eligible, not served						0	525	19	38	44
students eligible, served, not tutored						1	517	6	28	66
students eligible, served, tutored						0	516	12	27	62
Gifted/talented program										
yes						2	539	53	35	12
no						98	525	19	37	43
Identified disability										
yes						9	513	4	17	79
no						91	527	22	39	39
Language minority/LEP student										
bilingual never identified LEP						0	523	11	33	56
former LEP reclassified non-LEP										
current LEP						0	518	2	35	63
First grade in district										
before grade 9						76	526	21	38	40
grade 9						13	524	19	33	47
grade 10						4	524	16	37	47
grade 11						7	522	14	34	52
College prep										
yes						71	529	26	42	32
no						29	517	7	28	65
Optional school/district question										
A										
B										
C										
D										

Questionnaire Items	Sch.	State			
	% Students in Each Category	% Students in Each Category	Scaled Score	% Exceeds or Meets the Standards	% Does Not Meet the Standards
I learn in school most of what I need to know to answer the MEA visual and performing arts questions.					
strongly agree		9	528	27	38
agree		30	526	21	40
disagree		35	526	21	40
strongly disagree		26	523	15	49
"My knowledge of visual and performing arts will be useful to me in my future work."					
strongly agree		16	530	32	31
agree		32	526	22	41
disagree		32	525	18	42
strongly disagree		20	521	11	54
What best describes your participation in music?					
I take or took a course at school.		41	529	27	33
I have not taken a course at school.		44	523	13	49
I am involved outside of school.		12	527	26	39
My school does not offer opportunities.		3	515	6	71
What best describes your participation in visual arts?					
I take or took a course at school.		49	527	22	38
I have not taken a course at school.		41	524	18	45
I am involved outside of school.		5	525	23	45
My school does not offer opportunities.		4	519	10	61
What best describes your participation in theater or dance?					
I am involved in theater in or out of school.		17	529	29	34
I am involved in dance in or out of school.		11	525	18	44
I am involved in both theater and dance.		9	528	27	36
I am not involved in theater or dance.		64	524	17	45
High school career pathway					
college prep		74	529	26	31
tech prep		19	517	5	67
occupational prep		6	516	6	72
apprenticeship programs		1	513	3	77
Hours worked at part-time job during school week					
do not work part-time during school week		51	527	24	39
8 hours or fewer		18	527	21	39
9-21 hours		27	523	14	48
more than 21 hours		3	518	10	64
Parent education					
did not finish high school		4	516	7	68
graduated from high school		25	521	11	55
some education after high school		27	525	17	45
college and/or advanced degree		44	530	30	29

Common Item Class Report

MATHEMATICS

Grade 11

Code:
District:
School:
Class:
Date: March 2003
Group Size:

	Item Number	1	2	3	4	5	9	10	11	12	13	16	17	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	42	43	Points Earned (48 Max. Points)	Scaled Score	Performance Level
	Content Standard and Performance Indicator	C3	A1	I4	G1	E1	H3	E1	G2	H3	A1	G1	C2	I4	F2	I2	E2	E2	E2	A1	G3	A2	F2	F2	D1	B2	E2	F2	B1	B1	D1	H3			
	Item Type	MC	MC	MC	MC	MC	SA	SA	SA	SA	SA	CR	CR	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	CR	CR			
	Correct MC Response	C	D	B	A	A								A	A	C	D	B	C	D	B	A	D	C	B	B	B	C	D	C					
Name	Total Possible Points	1	1	1	1	1	2	2	2	2	2	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	4			

Item Number	1	2	3	4	5	9	10	11	12	13	16	17	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	42	43
Percent Correct/Avg. Score: Class																															
Percent Correct/Avg. Score: School																															
Percent Correct/Avg. Score: District																															
Percent Correct/Avg. Score: State	73	57	27	69	44	0.9	0.7	0.5	0.9	1.1	2.1	1.0	86	45	46	63	53	36	31	56	48	32	53	25	56	69	34	60	74	0.9	1.4

Common Item Class Report

SCIENCE & TECHNOLOGY

Grade 11

Code:
District:
School:
Class:
Date: March 2003
Group Size:

Name	Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	40	41	Points Earned (48 Max. Points)	Scaled Score	Performance Level
	Content Standard and Performance Indicator	M2	H2	E1	B1	D6	G1	L4	G1	K1	L4	B2	E3	K1	C3	H8	L4	K3	D2	F1	F1	M6	I1	E4	L1	M3	H3	I5	G2	A3	J2			
	Item Type	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	CR	CR	CR	CR	MC	MC	MC	MC	CR	CR			
	Correct MC Response	C	A	D	B	B	D	A	C	C	B	C	D	A	D	A	B	A	C	D	B					C	D	A	B					
	Total Possible Points	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	4	4	4	1	1	1	1	4	4			

Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	40	41
Percent Correct/Avg. Score: Class																														
Percent Correct/Avg. Score: School																														
Percent Correct/Avg. Score: District																														
Percent Correct/Avg. Score: State	89	72	35	50	44	61	64	66	54	82	56	23	64	83	32	57	81	62	53	59	1.8	1.1	1.7	1.1	89	73	51	52	1.2	1.3

Common Item Class Report

SOCIAL STUDIES

Grade 11

Code:
District:
School:
Class:
Date: March 2003
Group Size:

	Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	40	41	Points Earned (48 Max. Points)	Scaled Score	Performance Level
	Content Standard and Performance Indicator	EC1	HB1	CA4	GA1	GA3	EA1	EB3	ED2	GA1	HA1	EC2	HC1	GB2	CD1	EB2	CB4	HA1	HB4	GA2	GB4	EA1	HB1	GB1	CA4	HC4	ED1	GB1	CC7	HB5	CB1			
	Item Type	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	CR	CR	CR	CR	MC	MC	MC	MC	CR	CR			
	Correct MC Response	B	D	B	A	D	C	C	A	B	D	C	A	D	A	C	B	B	A	C	B					B	D	A	C					
Name	Total Possible Points	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	4	4	4	1	1	1	1	4	4			
Item Number		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	40	41			
Percent Correct/Avg. Score: Class																																		
Percent Correct/Avg. Score: School																																		
Percent Correct/Avg. Score: District																																		
Percent Correct/Avg. Score: State	82	52	53	68	81	62	75	74	36	53	67	52	69	50	71	53	39	55	59	83	1.6	1.5	1.6	1.4	86	73	57	57	1.4	1.7			

Important Information for Parents/Guardians Grade 11 Assessment March 2003 Administration

STATE OF MAINE
DEPARTMENT OF EDUCATION
23 State House Station
Augusta, ME 04333
September 2003

Susan A. Gendron
COMMISSIONER

Dear Parents and Guardians:

In March 2003, students across the state participated in the Maine Educational Assessment (MEA) tests in mathematics, science and technology, and social studies; this is a report of these results. A report was sent to you in June 2003 with the results of the MEA assessments in English language arts—reading and writing. While the MEA has been administered to Maine students for the past 18 years, it is now designed to measure the progress of schools and students in achieving *Learning Results* expectations adopted by the Legislature in 1997. The MEA is aligned with the content standards described in Maine's *Learning Results,* which are available for your review at the following address: http://www.state.me.us/education/lres/homepage.htm.

The MEA results are reported in four performance levels that describe the quality of a student's responses on each of the content area tests. While many students do not yet meet the *Learning Results* standards, keep in mind that these are new challenging standards for student performance. Our long-term goal is for all students to meet the standards so that Maine youth will be among the best educated in the world.

To fairly assess student progress in achieving *Learning Results*, Maine has chosen to use multiple local measures along with the MEA to create a more complete picture of a student's achievement. The MEA, as one measure of student performance, should be viewed with local measures of achievement, such as portfolios of student work, performance exhibitions, and end-of-term grades. The staff at your school will be able to provide further information about your student's performance on the MEA as well as the school's performance. I encourage you to contact the school to begin a conversation that will support your child's success.

Sincerely,

Susan A. Gendron

Susan A. Gendron
Commissioner

Information on Maine's *Learning Results*

- The *Learning Results* were developed in eight content areas by thousands of Maine citizens.
- The MEA was rewritten by hundreds of Maine teachers to align with the *Learning Results.*
- Setting MEA performance standards based on the quality of student work was completed by hundreds of Maine teachers and citizens.
- For a copy of Maine's *Learning Results,* either call 624-6621 or find them on-line at http://www.state.me.us/education/lres/homepage.htm.

Performance Levels and Score Ranges

On this assessment, results are reported as four performance levels using scaled scores that range from 501 to 580. **The text below describes the quality of student work for each performance level.**

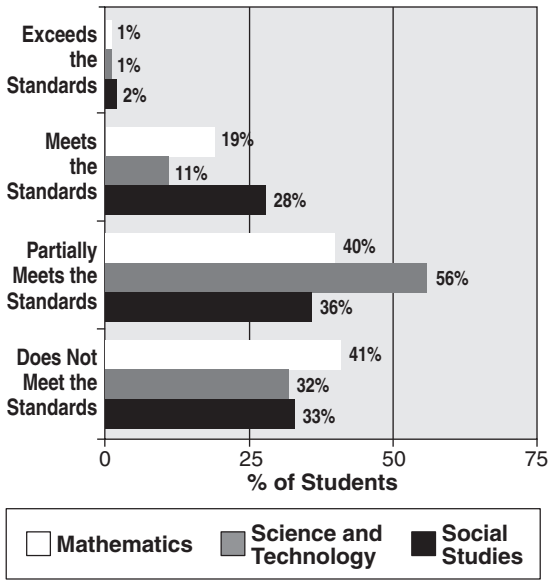
❒ **Exceeds the Standards (561 to 580)**
The student's work demonstrates exemplary accomplishment of content knowledge, analysis, problem-solving, and communication skills.

❒ **Meets the Standards (541 to 560)**
The student's work demonstrates consistent accomplishment of content knowledge, analysis, problem-solving, and communication skills.

❒ **Partially Meets the Standards (521 to 540)**
The student's work demonstrates inconsistent accomplishment of content knowledge, analysis, problem-solving, and communication skills.

❒ **Does Not Meet the Standards (501 to 520)**
The student's work demonstrates limited command of content knowledge, analysis, problem-solving, and communication skills.

Maine State MEA Summary Results March 2003 Administration



Student	Grade	School	District
	11		

Content Area	Performance Level	Score	This Student's Performance Levels and Scores
			Does Not Meet the Standards / Partially Meets the Standards / Meets the Standards / Exceeds the Standards
Mathematics			
Science & Technology			
Social Studies			

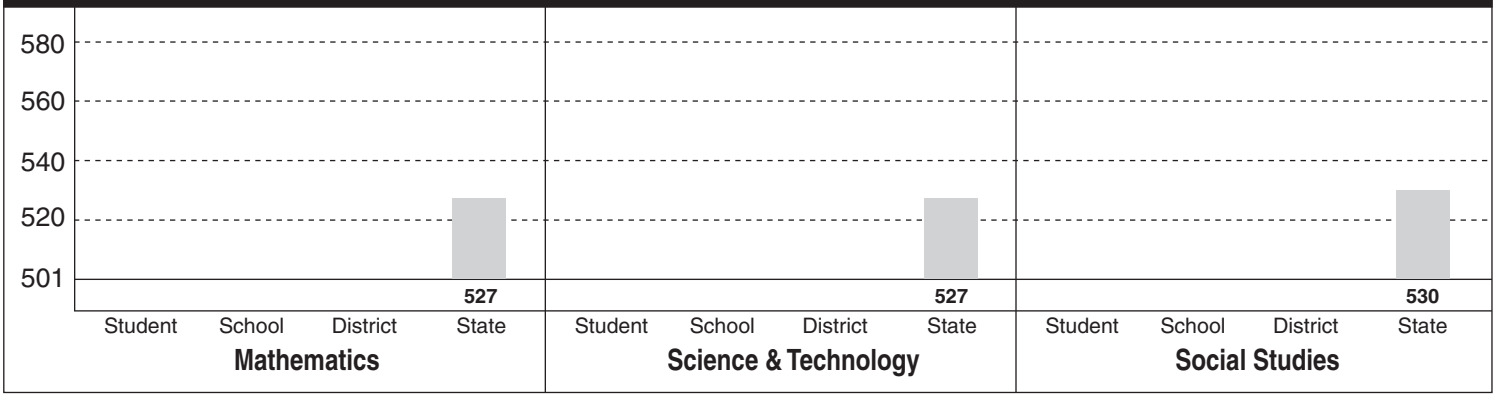
501 520 540 560 580

Testing Incomplete (TI):
Student failed to attempt one or more sessions.

See reverse side for description of performance levels and state summary results.

The diamond (◆) represents the student's score. The bar (▬) surrounding the score represents the probable range of scores for the student if he or she were to be tested many times. This statistic is called the standard error of measurement.

How this Student's Performance Compared to Average Scores from School, District, and State



This Student's Performance in Content Area Subcategories

Content Areas	Content Area Subcategories	Student's Score Compared with Meeting the State Standards: Weaker / Meets the Standards / Stronger
Mathematics	Content	
	Application	
Science & Technology	Content	
	Application	
Social Studies	Content	
	Application	

Definitions of Content Area Subcategories

Content: Refers to a student's knowledge and conceptual understanding of the content area and of the procedures necessary to acquire new learning.

Application: Refers to a student's use of knowledge and to his/her conceptual and procedural understanding for applying knowledge in the content area through reasoning, inquiry, communicating ideas, and/or solving problems.

Scores for Content and Application are derived from particular subsets of items in each content area that emphasize those types of knowledge.

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 11 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 11 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 11 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 11 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 11 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 11 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 11 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 11 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 11 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 11 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:

Performance Levels Scaled Scores

Grade: 11 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

Name:
School:
District:

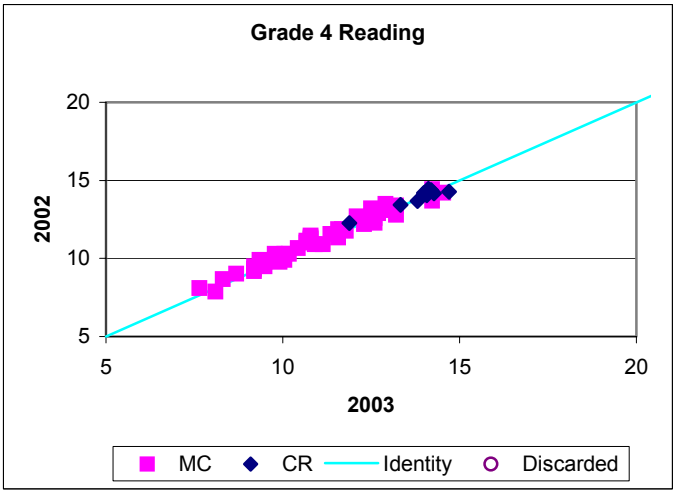
Performance Levels Scaled Scores

Grade: 11 Mathematics:
Date: 03/03 Science:
Social Studies:

The MEA was revised in 1998/99 to assess Maine's *Learning Results,* required by law to be fully implemented by 2002-2003.

APPENDIX B

DELTA PLOTS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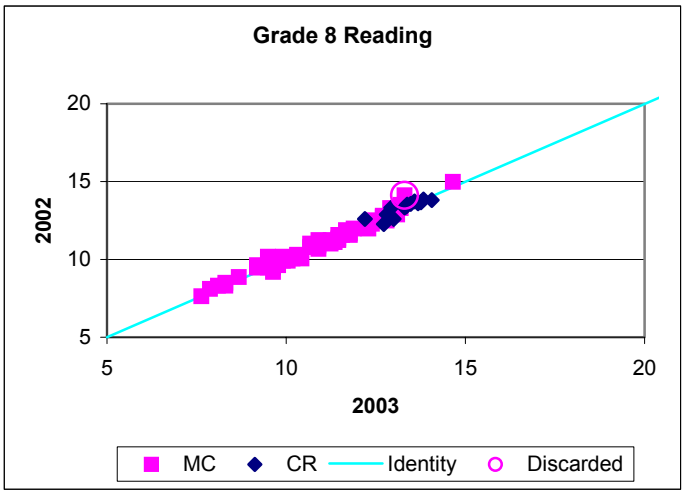
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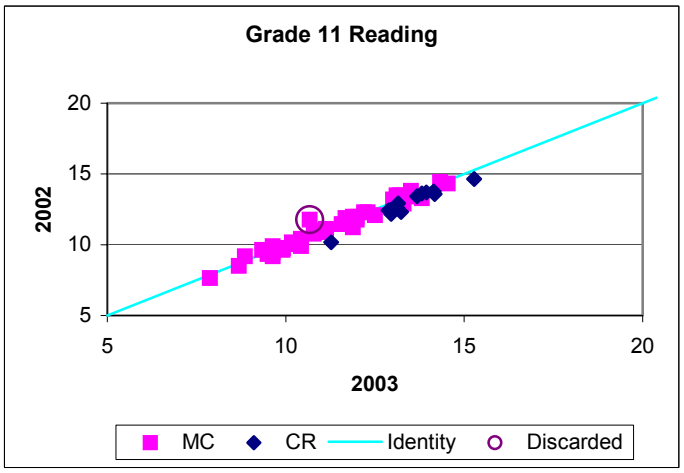
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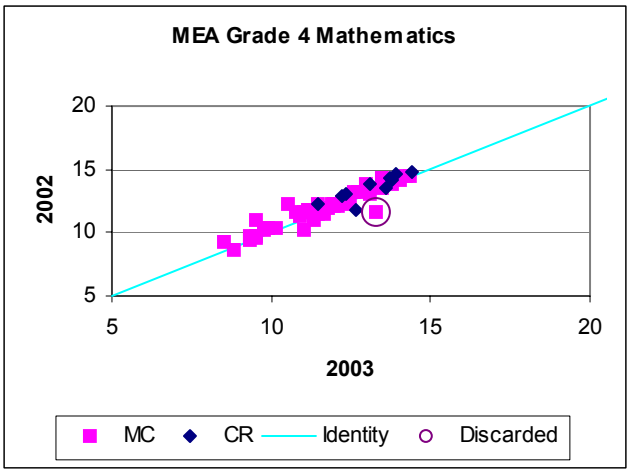
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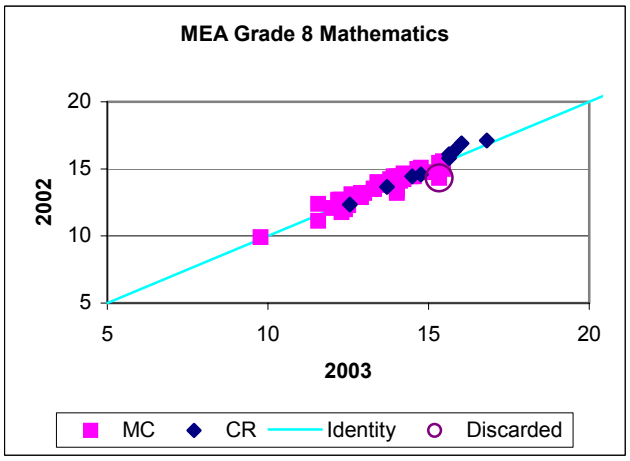
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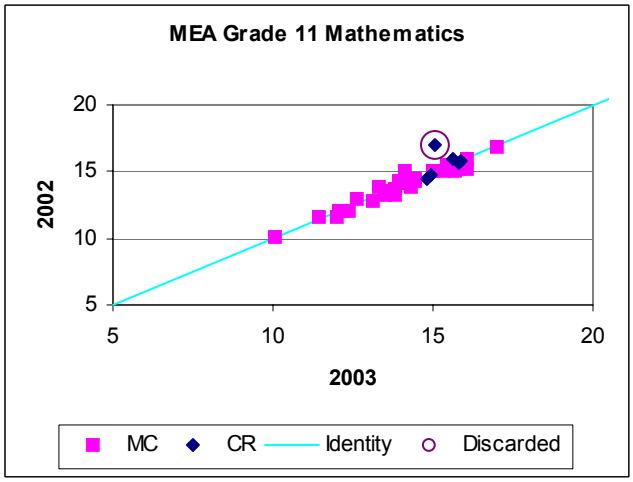
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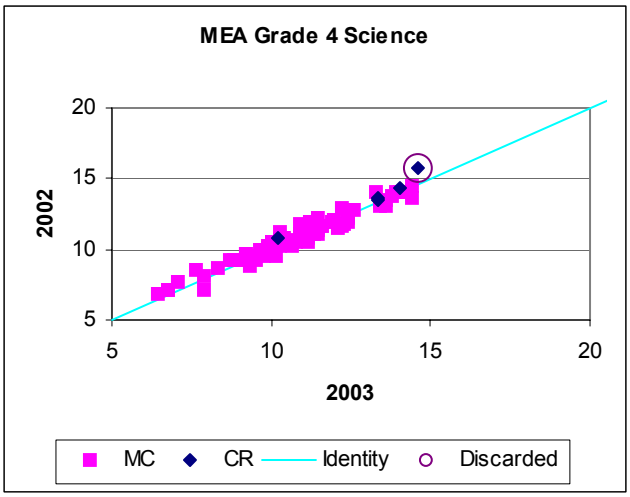
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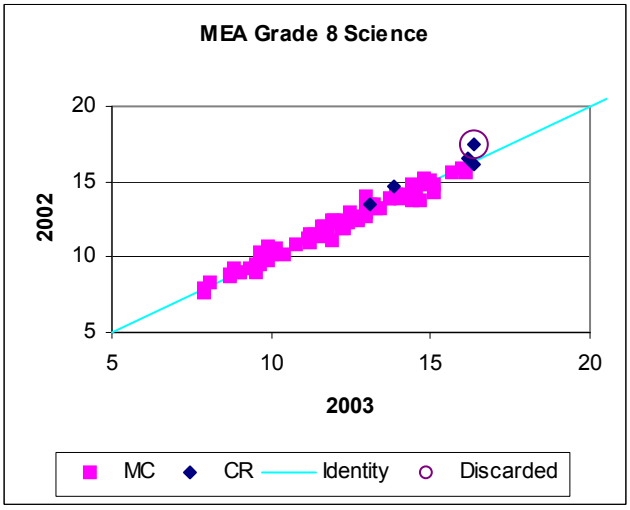
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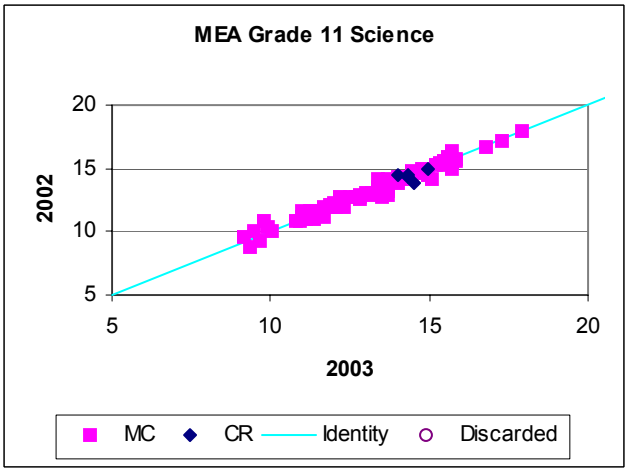
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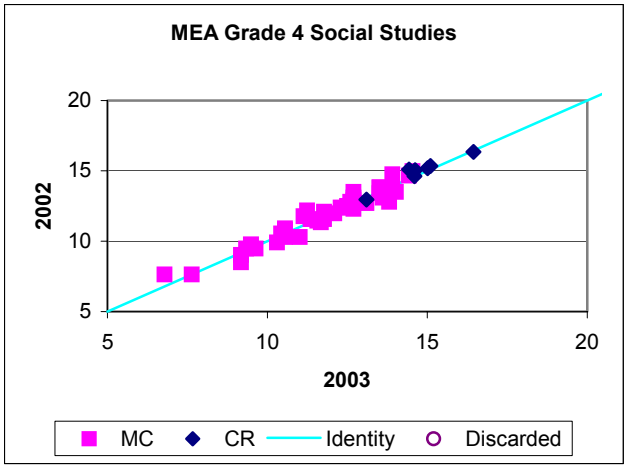
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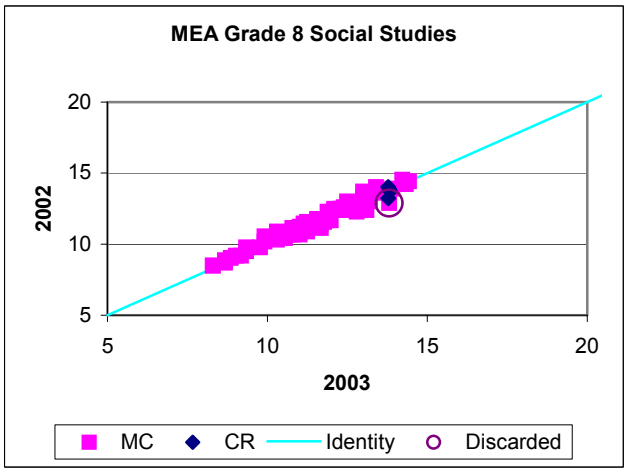
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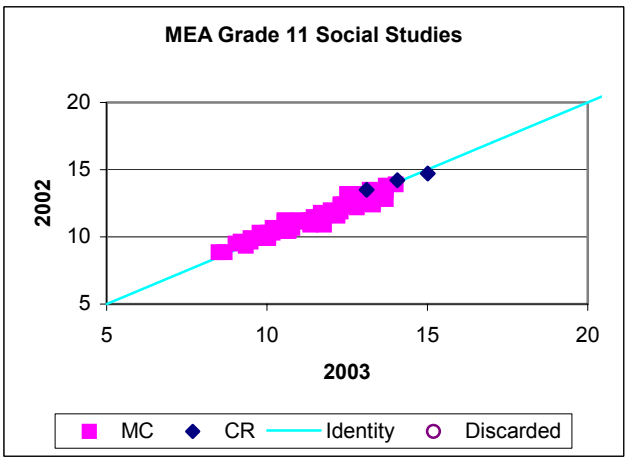
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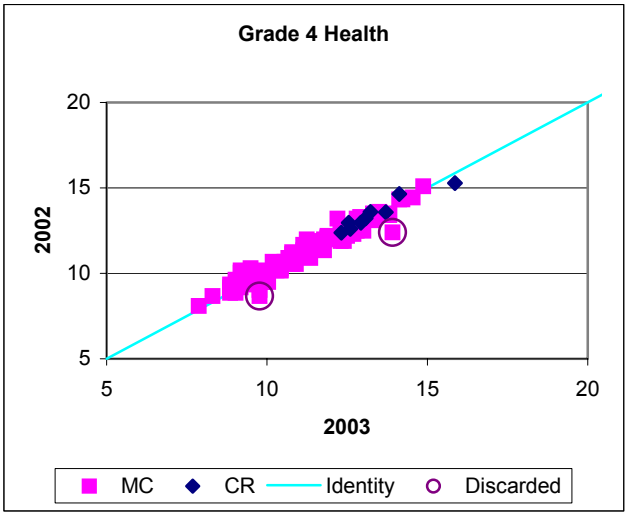
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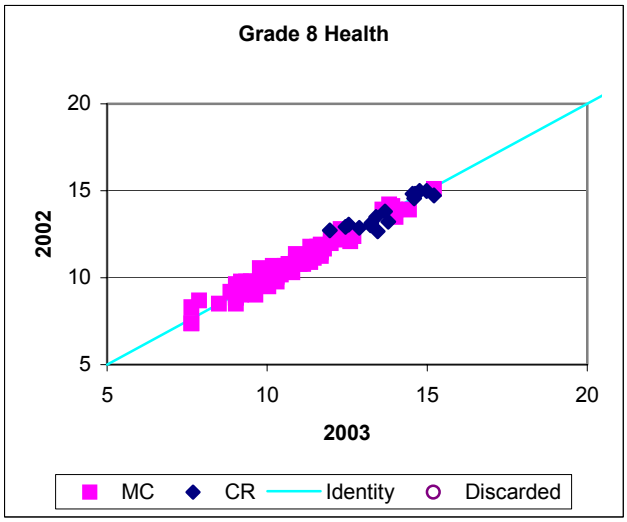
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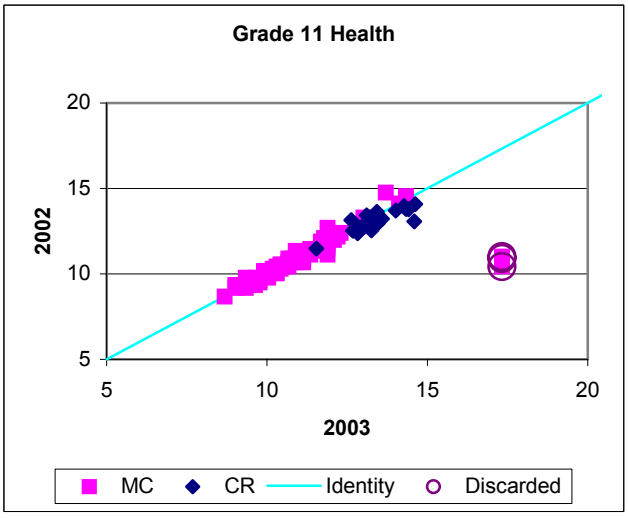
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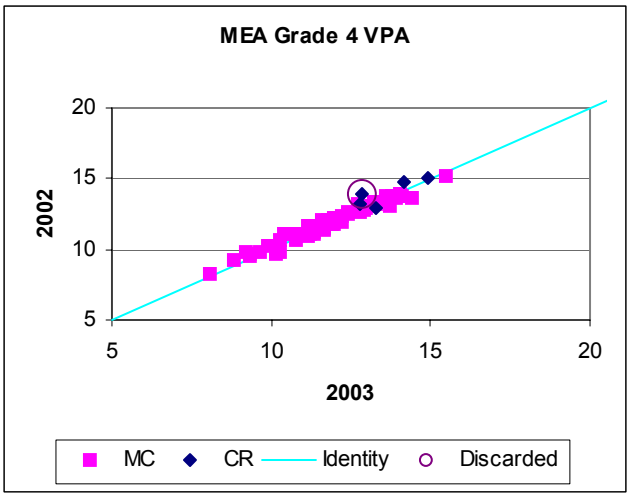
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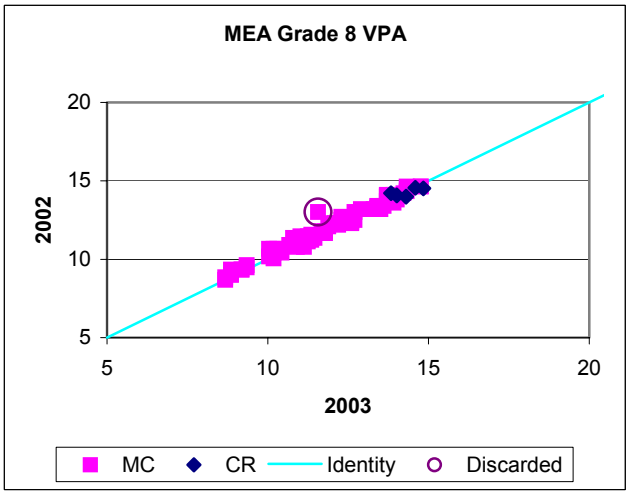
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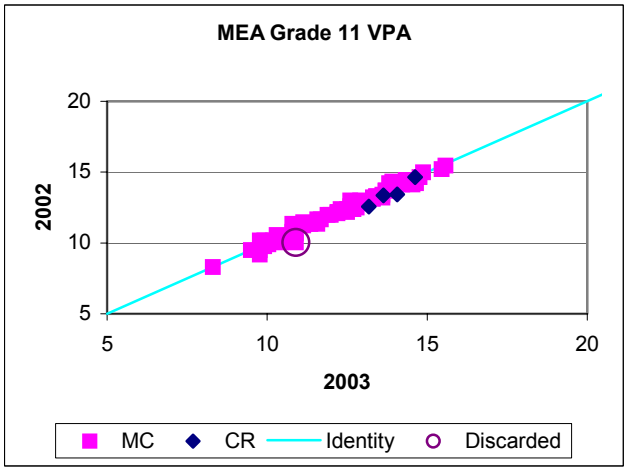
MEA Grade 11 VPA
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APPENDIX C

ACCURACY AND CONSISTENCY OF CLASSIFICATIONS

Accuracy and Consistency of Classifications

Grade 04 Reading

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.005323	0.00334	0.00000	0.000000	||	0.00866
Partially Meets the Standards	0.073990	0.53235	0.04919	0.000000	||	0.65564
Meets the Standards	0.000002	0.04980	0.23172	0.008577	||	0.29010
Exceeds the Standards	-0.000000	0.00000	0.01063	0.034927	||	0.04556
	0.079315	0.58549	0.29154	0.043505		0.99996

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.00707	0.00229	6.42E-8	183E-23	||	0.00936
Partially Meets the Standards	0.09826	0.36597	0.08186	2.02E-8	||	0.5461
Meets the Standards	2.11E-6	0.03423	0.38558	0.00139	||	0.4212
Exceeds the Standards	-26E-19	3.86E-8	0.01769	0.00565	||	0.02334
					||	
Marginal	0.10534	0.4025	0.48513	0.00704	||	1

accuracy	cut1	cut2	cut3
0.76427	0.89944	0.88390	0.98092

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.026932	0.05225	0.00015	0.000000	||	0.0793
Partially Meets the Standards	0.052246	0.46423	0.06905	0.000022	||	0.5856
Meets the Standards	0.000148	0.06905	0.20932	0.012997	||	0.2916
Exceeds the Standards	0.000000	0.00002	0.01300	0.030491	||	0.0435
	0.079326	0.58555	0.29151	0.043509		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.03576	0.03590	0.00025	8.6828E-12	||	0.07192
Partially Meets the Standards	0.06937	0.31909	0.11490	.000003479	||	0.50340
Meets the Standards	0.00020	0.04746	0.34833	.002101421	||	0.39811
Exceeds the Standards	0.00000	0.00001	0.02163	.004929543	||	0.02657
	0.10532	0.40247	0.48510	.007034443		1.00000

consist	cut1	cut2	cut3	line	kappa
0.70814	0.89427	0.83716	0.97625	||	0.51071

Accuracy and Consistency of Classifications

Grade 04 Writing

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.11731	0.03616	0.000003	1.2554E-14	||	0.15347
Partially Meets the Standards	0.15997	0.58374	0.038948	.000003257	||	0.78271
Meets the Standards	0.00002	0.02378	0.039612	.000359893	||	0.06377
Exceeds the Standards	0.00000	0.00000	0.000009	.000008319	||	0.00002
	0.27730	0.64368	0.078573	.000371468		0.99997

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.06393	0.04091	5.27E-6	903E-17	||	0.10484
Partially Meets the Standards	0.08718	0.66022	0.05977	2.34E-6	||	0.80718
Meets the Standards	9.9E-6	0.02689	0.0608	0.00026	||	0.08796
Exceeds the Standards	332E-19	4.56E-9	0.00001	5.98E-6	||	0.00002
					||	
Marginal	0.15112	0.72802	0.12059	0.00027	||	1

accuracy	cut1	cut2	cut3
0.78496	0.87190	0.91332	0.99972

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.15060	0.12585	0.000858	.000000018	||	0.2773
Partially Meets the Standards	0.12585	0.47400	0.043770	.000033215	||	0.6437
Meets the Standards	0.00086	0.04377	0.033630	.000308275	||	0.0786
Exceeds the Standards	0.00000	0.00003	0.000308	.000029940	||	0.0004
	0.27732	0.64366	0.078566	.000371448		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.08206	0.14233	0.00132	.000000013	||	0.22574
Partially Meets the Standards	0.06857	0.53601	0.06717	.000023894	||	0.67191
Meets the Standards	0.00047	0.04951	0.05162	.000221789	||	0.10182
Exceeds the Standards	0.00000	0.00004	0.00047	.000021536	||	0.00053
	0.15110	0.72789	0.12058	.000267232		1.00000

consist	cut1	cut2	cut3	line	kappa
0.66983	0.78727	0.88146	0.99924	||	0.2891

Accuracy and Consistency of Classifications

Grade 04 Mathematics

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.27460	0.03269	0.00002	0.000000	||	0.30731
Partially Meets the Standards	0.08028	0.29938	0.04177	0.000039	||	0.42145
Meets the Standards	0.00018	0.05618	0.17285	0.016342	||	0.24557
Exceeds the Standards	0.00000	0.00002	0.00987	0.015678	||	0.02557
	0.35505	0.38827	0.22452	0.032060		0.99991

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.2136	0.03664	0.00003	147E-13	||	0.25026
Partially Meets the Standards	0.06244	0.33546	0.04738	0.00004	||	0.44532
Meets the Standards	0.00014	0.06296	0.19609	0.01736	||	0.27654
Exceeds the Standards	253E-13	0.00002	0.0112	0.01665	||	0.02787
Marginal	0.27618	0.43507	0.25469	0.03405	||	1

accuracy	cut1	cut2	cut3
0.76180	0.90076	0.88943	0.97138

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.27875	0.07468	0.00167	0.000001	||	0.3551
Partially Meets the Standards	0.07468	0.24808	0.06476	0.000761	||	0.3883
Meets the Standards	0.00167	0.06476	0.14023	0.017860	||	0.2245
Exceeds the Standards	0.00000	0.00076	0.01786	0.013437	||	0.0321
	0.35510	0.38827	0.22452	0.032060		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.21680	0.08366	0.00189	0.000001	||	0.30237
Partially Meets the Standards	0.05807	0.27795	0.07344	0.000808	||	0.41032
Meets the Standards	0.00130	0.07256	0.15906	0.018970	||	0.25192
Exceeds the Standards	0.00000	0.00085	0.02026	0.014269	||	0.03539
	0.27617	0.43503	0.25465	0.034049		1.00000

consist	cut1	cut2	cut3	line	kappa
0.66813	0.85505	0.84912	0.95910	||	0.50659

Accuracy and Consistency of Classifications

Grade 04 Science

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.31329	0.04127	0.000001	3.4295E-17	||	0.35455
Partially Meets the Standards	0.12360	0.45380	0.028664	.000000387	||	0.60608
Meets the Standards	0.00000	0.01325	0.025944	.000099078	||	0.03929
Exceeds the Standards	0.00000	0.00000	0.000002	.000001891	||	0.00000
	0.43689	0.50831	0.054611	.000101356		0.99993

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.22019	0.05247	9.21E-7	222E-18	||	0.27266
Partially Meets the Standards	0.08687	0.57695	0.02415	2.51E-6	||	0.68798
Meets the Standards	2.4E-6	0.01685	0.02186	0.00064	||	0.03935
Exceeds the Standards	597E-22	175E-12	1.86E-6	0.00001	||	0.00001
					||	
Marginal	0.30706	0.64627	0.04602	0.00066	||	1

accuracy	cut1	cut2	cut3
0.81902	0.86066	0.95900	0.99935

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.32941	0.10709	0.000376	7.5192E-10	||	0.4369
Partially Meets the Standards	0.10709	0.37122	0.030037	.000005343	||	0.5084
Meets the Standards	0.00038	0.03004	0.024113	.000089213	||	0.0546
Exceeds the Standards	0.00000	0.00001	0.000089	.000006788	||	0.0001
	0.43687	0.50834	0.054615	.000101345		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.23151	0.13611	0.000317	.000000005	||	0.36799
Partially Meets the Standards	0.07526	0.47192	0.025307	.000034653	||	0.57254
Meets the Standards	0.00026	0.03819	0.020313	.000578642	||	0.05934
Exceeds the Standards	0.00000	0.00001	0.000075	.000044025	||	0.00013
	0.30703	0.64622	0.046012	.000657325		1.00000

consist	cut1	cut2	cut3	line	kappa
0.72384	0.78802	0.93588	0.99930	||	0.46299

Accuracy and Consistency of Classifications

Grade 04 Social Studies

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.14737	0.03153	0.00002	0.000000	||	0.17892
Partially Meets the Standards	0.07397	0.41730	0.07497	0.000021	||	0.56628
Meets the Standards	0.00006	0.05000	0.18411	0.009092	||	0.24329
Exceeds the Standards	0.00000	0.00000	0.00406	0.007406	||	0.01146
	0.22141	0.49883	0.26315	0.016519		0.99996

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.11388	0.03367	0.00002	499E-15	||	0.14756
Partially Meets the Standards	0.05717	0.4455	0.08011	0.00002	||	0.58279
Meets the Standards	0.00005	0.05337	0.19674	0.00835	||	0.25851
Exceeds the Standards	249E-15	1.54E-6	0.00433	0.0068	||	0.01113
Marginal	0.1711	0.53254	0.2812	0.01516	||	1

accuracy	cut1	cut2	cut3
0.76292	0.90909	0.86643	0.98730

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.14746	0.07233	0.00160	0.000000	||	0.2214
Partially Meets the Standards	0.07233	0.34094	0.08528	0.000271	||	0.4989
Meets the Standards	0.00160	0.08528	0.16675	0.009529	||	0.2632
Exceeds the Standards	0.00000	0.00027	0.00953	0.006720	||	0.0165
	0.22139	0.49882	0.26316	0.016520		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.11397	0.07721	0.00171	0.000000	||	0.19289
Partially Meets the Standards	0.05589	0.36395	0.09113	0.000248	||	0.51126
Meets the Standards	0.00124	0.09103	0.17816	0.008747	||	0.27922
Exceeds the Standards	0.00000	0.00029	0.01018	0.006167	||	0.01664
	0.17109	0.53249	0.28118	0.015163		1.00000

consist	cut1	cut2	cut3	line	kappa
0.66231	0.86395	0.81434	0.98053	||	0.45177

Accuracy and Consistency of Classifications

Grade 04 Health

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.000000	0.00000	0.00000	0.000000	||	0.00000
Partially Meets the Standards	0.027405	0.58850	0.10428	0.000141	||	0.72034
Meets the Standards	0.000378	0.09894	0.15784	0.009813	||	0.26697
Exceeds the Standards	0.000000	0.00002	0.00396	0.008631	||	0.01261
	0.027783	0.68745	0.26607	0.018585		0.99991

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0	0	0	0	||	0
Partially Meets the Standards	0.01362	0.55402	0.12324	0.00019	||	0.69108
Meets the Standards	0.00019	0.09314	0.18654	0.01296	||	0.29283
Exceeds the Standards	126E-13	0.00001	0.00468	0.0114	||	0.01609
Marginal	0.01381	0.64718	0.31446	0.02455	||	1

accuracy	cut1	cut2	cut3
0.75197	0.98619	0.78323	0.98216

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.001352	0.02333	0.00310	0.000004	||	0.0278
Partially Meets the Standards	0.023331	0.53015	0.13284	0.001087	||	0.6875
Meets the Standards	0.003095	0.13284	0.12067	0.009489	||	0.2661
Exceeds the Standards	0.000004	0.00109	0.00949	0.008005	||	0.0186
	0.027781	0.68741	0.26609	0.018585		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.000672	0.02196	0.00366	0.000005	||	0.02630
Partially Meets the Standards	0.011599	0.49908	0.15698	0.001436	||	0.66916
Meets the Standards	0.001539	0.12503	0.14258	0.012531	||	0.28173
Exceeds the Standards	0.000002	0.00102	0.01121	0.010572	||	0.02281
	0.013811	0.64710	0.31443	0.024544		1.00000

consist	cut1	cut2	cut3	line	kappa
0.65298	0.96123	0.71029	0.97379	||	0.27313

Accuracy and Consistency of Classifications

Grade 04 Visual and Performing Arts

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.14682	0.09685	0.00342	0.000070	||	0.24716
Partially Meets the Standards	0.11983	0.36298	0.08705	0.009064	||	0.57898
Meets the Standards	0.00413	0.07312	0.07327	0.023304	||	0.17383
Exceeds the Standards	0.00000	0.00000	0.00000	0.000000	||	0.00000
	0.27077	0.53294	0.16375	0.032438		0.99997

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.14549	0.08451	0.00458	0.0001	||	0.23468
Partially Meets the Standards	0.11874	0.31676	0.11645	0.01329	||	0.56524
Meets the Standards	0.00409	0.0638	0.09803	0.03416	||	0.20008
Exceeds the Standards	0	0	0	0	||	0
Marginal	0.26833	0.46506	0.21906	0.04755	||	1

accuracy	cut1	cut2	cut3
0.56028	0.78798	0.79769	0.95245

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.12210	0.13101	0.01618	0.001479	||	0.2708
Partially Meets the Standards	0.13101	0.30139	0.08626	0.014273	||	0.5330
Meets the Standards	0.01618	0.08626	0.04885	0.012466	||	0.1638
Exceeds the Standards	0.00148	0.01427	0.01247	0.004220	||	0.0324
	0.27077	0.53293	0.16376	0.032438		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.12099	0.11432	0.02165	0.002168	||	0.25914
Partially Meets the Standards	0.12982	0.26300	0.11537	0.020920	||	0.52915
Meets the Standards	0.01604	0.07526	0.06534	0.018272	||	0.17493
Exceeds the Standards	0.00147	0.01245	0.01667	0.006186	||	0.03678
	0.26831	0.46503	0.21903	0.047546		1.00000

consist	cut1	cut2	cut3	line	kappa
0.45554	0.71452	0.73465	0.92804	||	0.15497

Accuracy and Consistency of Classifications

Grade 08 Reading

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.07965	0.02414	0.00000	0.000000	||	0.10379
Partially Meets the Standards	0.07239	0.46973	0.04336	0.000001	||	0.58545
Meets the Standards	0.00001	0.05521	0.20657	0.009281	||	0.27106
Exceeds the Standards	0.00000	0.00000	0.00970	0.029854	||	0.03955
	0.15204	0.54908	0.25963	0.039136		0.99985

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.06555	0.0189	6.26E-7	245E-20	||	0.08445
Partially Meets the Standards	0.05958	0.36774	0.07273	1.73E-7	||	0.50005
Meets the Standards	4.47E-6	0.04322	0.34655	0.00224	||	0.39202
Exceeds the Standards	318E-19	3.03E-7	0.01627	0.0072	||	0.02348
					||	
Marginal	0.12513	0.42986	0.43556	0.00944	||	1

accuracy	cut1	cut2	cut3
0.78704	0.92151	0.88404	0.98149

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.08609	0.06572	0.00023	0.000000	||	0.1521
Partially Meets the Standards	0.06572	0.41595	0.06737	0.000069	||	0.5491
Meets the Standards	0.00023	0.06737	0.17902	0.013014	||	0.2597
Exceeds the Standards	0.00000	0.00007	0.01301	0.026051	||	0.0391
	0.15204	0.54911	0.25963	0.039133		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.07085	0.05145	0.00039	2.1933E-10	||	0.12269
Partially Meets the Standards	0.05408	0.32556	0.11301	.000016585	||	0.49274
Meets the Standards	0.00019	0.05273	0.30029	.003139973	||	0.35640
Exceeds the Standards	0.00000	0.00005	0.02183	.006285667	||	0.02817
	0.12512	0.42980	0.43552	.009442225		1.00000

consist	cut1	cut2	cut3	line	kappa
0.70308	0.89388	0.83359	0.97496	||	0.51903

Accuracy and Consistency of Classifications

Grade 08 Writing

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.000000	0.00000	0.00000	0	||	0.00000
Partially Meets the Standards	0.038429	0.59314	0.08015	.000009881	||	0.71179
Meets the Standards	0.000023	0.07248	0.21317	.002455235	||	0.28809
Exceeds the Standards	0.000000	0.00000	0.00000	0	||	0.00000
	0.038452	0.66562	0.29332	.002465116		0.99988

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0	0	0	0	||	0
Partially Meets the Standards	0.04613	0.48487	0.11156	6.04E-6	||	0.64256
Meets the Standards	0.00003	0.05924	0.29667	0.0015	||	0.35744
Exceeds the Standards	0	0	0	0	||	0
Marginal	0.04616	0.54411	0.40823	0.00151	||	1

accuracy	cut1	cut2	cut3
0.78154	0.95384	0.82917	0.99849

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.004161	0.03341	0.00088	.000000030	||	0.0385
Partially Meets the Standards	0.033409	0.52600	0.10608	.000218987	||	0.6657
Meets the Standards	0.000882	0.10608	0.18417	.002182961	||	0.2933
Exceeds the Standards	0.000000	0.00022	0.00218	.000062943	||	0.0025
	0.038452	0.66571	0.29332	.002464921		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.004995	0.02730	0.00123	.000000018	||	0.03353
Partially Meets the Standards	0.040100	0.42987	0.14761	.000133812	||	0.61779
Meets the Standards	0.001059	0.08670	0.25629	.001333952	||	0.34543
Exceeds the Standards	0.000000	0.00018	0.00304	.000038460	||	0.00326
	0.046154	0.54405	0.40817	.001506243		1.00000

consist	cut1	cut2	cut3	line	kappa
0.69128	0.93031	0.76306	0.99531	||	0.40778

Accuracy and Consistency of Classifications

Grade 08 Mathematics

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.33240	0.04068	0.00000	5.9078E-14	||	0.37305
Partially Meets the Standards	0.06853	0.36243	0.03278	.000007081	||	0.46375
Meets the Standards	0.00003	0.04958	0.11040	.003107071	||	0.16312
Exceeds the Standards	0.00000	0.00000	0.00000	0	||	0.00000
	0.40095	0.45268	0.14318	.003114152		0.99991

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.2694	0.04495	3.74E-6	814E-16	||	0.31435
Partially Meets the Standards	0.05555	0.40043	0.03905	9.76E-6	||	0.49504
Meets the Standards	0.00002	0.05477	0.13153	0.00428	||	0.19061
Exceeds the Standards	0	0	0	0	||	0
Marginal	0.32497	0.50015	0.17059	0.00429	||	1

accuracy	cut1	cut2	cut3
0.80136	0.89948	0.90614	0.99571

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.32507	0.07539	0.00045	.000000040	||	0.4010
Partially Meets the Standards	0.07539	0.32312	0.05398	.000204474	||	0.4527
Meets the Standards	0.00045	0.05398	0.08614	.002616882	||	0.1432
Exceeds the Standards	0.00000	0.00020	0.00262	.000292599	||	0.0031
	0.40092	0.45270	0.14318	.003113995		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.26349	0.08330	0.00054	.000000055	||	0.34733
Partially Meets the Standards	0.06111	0.35693	0.06430	.000281751	||	0.48269
Meets the Standards	0.00036	0.05963	0.10262	.003606319	||	0.16623
Exceeds the Standards	0.00000	0.00023	0.00312	.000403225	||	0.00375
	0.32497	0.50009	0.17057	.004291351		1.00000

consist	cut1	cut2	cut3	line	kappa
0.72350	0.85468	0.87465	0.99277	||	0.55211

Accuracy and Consistency of Classifications

Grade 08 Science

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.23712	0.05910	0.00002	3.415E-13	||	0.29620
Partially Meets the Standards	0.07399	0.45544	0.05287	.000011375	||	0.58228
Meets the Standards	0.00002	0.03090	0.08478	.002883434	||	0.11858
Exceeds the Standards	0.00000	0.00000	0.00100	.001789093	||	0.00279
	0.31113	0.54544	0.13867	.004683902		0.99985

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.21059	0.0629	0.00002	601E-15	||	0.27351
Partially Meets the Standards	0.06572	0.48473	0.05145	0.00002	||	0.60191
Meets the Standards	0.00002	0.03288	0.0825	0.00507	||	0.12046
Exceeds the Standards	138E-16	4.45E-7	0.00097	0.00315	||	0.00412
					||	
Marginal	0.27632	0.58051	0.13493	0.00824	||	1

accuracy	cut1	cut2	cut3
0.78096	0.87135	0.91562	0.99393

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.21854	0.09175	0.00085	.000000048	||	0.3111
Partially Meets the Standards	0.09175	0.39520	0.05840	.000121683	||	0.5455
Meets the Standards	0.00085	0.05840	0.07654	.002881050	||	0.1387
Exceeds the Standards	0.00000	0.00012	0.00288	.001681089	||	0.0047
	0.31113	0.54547	0.13866	.004683870		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.19406	0.09764	0.00082	.000000084	||	0.29255
Partially Meets the Standards	0.08148	0.42053	0.05682	.000214070	||	0.55911
Meets the Standards	0.00075	0.06214	0.07448	.005067825	||	0.14245
Exceeds the Standards	0.00000	0.00013	0.00280	.002957344	||	0.00589
	0.27629	0.58044	0.13492	.008239323		1.00000

consist	cut1	cut2	cut3	line	kappa
0.69211	0.81930	0.87911	0.99178	||	0.46485

Accuracy and Consistency of Classifications

Grade 08 Social Studies

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.18994	0.03634	0.00000	0.000000	||	0.22629
Partially Meets the Standards	0.08142	0.46027	0.04122	0.000009	||	0.58289
Meets the Standards	0.00003	0.05396	0.12192	0.005485	||	0.18140
Exceeds the Standards	0.00000	0.00000	0.00291	0.006393	||	0.00931
	0.27139	0.55057	0.16605	0.011887		0.99988

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.15639	0.03528	4.31E-6	561E-16	||	0.19168
Partially Meets the Standards	0.06704	0.44694	0.05731	8.05E-6	||	0.57129
Meets the Standards	0.00002	0.0524	0.16946	0.00512	||	0.22701
Exceeds the Standards	193E-16	1.73E-6	0.00405	0.00597	||	0.01002
					||	
Marginal	0.22346	0.53462	0.23082	0.0111	||	1

accuracy	cut1	cut2	cut3
0.77876	0.89765	0.89026	0.99082

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.18964	0.08118	0.00058	0.000000	||	0.2714
Partially Meets the Standards	0.08118	0.40637	0.06282	0.000220	||	0.5506
Meets the Standards	0.00058	0.06282	0.09666	0.005975	||	0.1661
Exceeds the Standards	0.00000	0.00022	0.00597	0.005692	||	0.0119
	0.27140	0.55059	0.16604	0.011887		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.15613	0.07881	0.00081	0.000000	||	0.23577
Partially Meets the Standards	0.06682	0.39453	0.08731	0.000206	||	0.54895
Meets the Standards	0.00048	0.06100	0.13437	0.005581	||	0.20144
Exceeds the Standards	0.00000	0.00021	0.00830	0.005317	||	0.01384
	0.22343	0.53455	0.23079	0.011104		1.00000

consist	cut1	cut2	cut3	line	kappa
0.69043	0.85306	0.84997	0.98569	||	0.49016

Accuracy and Consistency of Classifications

Grade 08 Health

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.001104	0.00087	0.00000	1.2928E-15	||	0.00198
Partially Meets the Standards	0.024353	0.53955	0.11624	.000016294	||	0.68018
Meets the Standards	0.000036	0.09738	0.21848	.001857281	||	0.31775
Exceeds the Standards	0.000000	0.00000	0.00000	.000000025	||	0.00000
	0.025493	0.63781	0.33472	.001873600		0.99990

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.00115	0.00084	2.51E-7	191E-17	||	0.00199
Partially Meets the Standards	0.02536	0.51934	0.1239	0.00002	||	0.66862
Meets the Standards	0.00004	0.09372	0.23288	0.00275	||	0.32939
Exceeds the Standards	211E-21	175E-13	3.86E-8	3.74E-8	||	7.59E-8
Marginal	0.02655	0.6139	0.35678	0.00277	||	1

accuracy	cut1	cut2	cut3
0.75336	0.97376	0.78232	0.99723

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.004358	0.02039	0.00074	.000000043	||	0.0255
Partially Meets the Standards	0.020390	0.47394	0.14337	.000188202	||	0.6379
Meets the Standards	0.000745	0.14337	0.18896	.001610756	||	0.3347
Exceeds the Standards	0.000000	0.00019	0.00161	.000074551	||	0.0019
	0.025493	0.63789	0.33469	.001873551		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.004539	0.01962	0.00079	.000000064	||	0.02496
Partially Meets the Standards	0.021233	0.45605	0.15280	.000278533	||	0.63045
Meets the Standards	0.000776	0.13797	0.20142	.002383709	||	0.34258
Exceeds the Standards	0.000000	0.00018	0.00172	.000110328	||	0.00201
	0.026547	0.61383	0.35673	.002772633		1.00000

consist	cut1	cut2	cut3	line	kappa
0.66219	0.95757	0.70715	0.99544	||	0.31069

Accuracy and Consistency of Classifications

Grade 08 Visual and Performing Arts

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.20691	0.05573	0.00531	0.000120	||	0.26807
Partially Meets the Standards	0.16284	0.24481	0.10258	0.010864	||	0.52112
Meets the Standards	0.00980	0.06191	0.09384	0.034363	||	0.19992
Exceeds the Standards	0.00001	0.00046	0.00384	0.006531	||	0.01085
	0.37956	0.36292	0.20558	0.051877		0.99995

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.17804	0.06031	0.00617	0.0001	||	0.24461
Partially Meets the Standards	0.14012	0.26489	0.11913	0.00879	||	0.53293
Meets the Standards	0.00843	0.067	0.10897	0.0278	||	0.2122
Exceeds the Standards	9.9E-6	0.0005	0.00446	0.00528	||	0.01026
					||	
Marginal	0.3266	0.3927	0.23873	0.04196	||	1

accuracy	cut1	cut2	cut3
0.55719	0.78486	0.78987	0.95834

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.22498	0.11766	0.03340	0.003491	||	0.3796
Partially Meets the Standards	0.11766	0.15167	0.07927	0.014317	||	0.3629
Meets the Standards	0.03340	0.07927	0.07101	0.021908	||	0.2056
Exceeds the Standards	0.00349	0.01432	0.02191	0.012163	||	0.0519
	0.37953	0.36292	0.20559	0.051878		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.19357	0.12732	0.03878	0.002823	||	0.36253
Partially Meets the Standards	0.10124	0.16409	0.09204	0.011580	||	0.36899
Meets the Standards	0.02874	0.08577	0.08246	0.017719	||	0.21470
Exceeds the Standards	0.00300	0.01549	0.02544	0.009838	||	0.05377
	0.32656	0.39267	0.23872	0.041960		1.00000

consist	cut1	cut2	cut3	line	kappa
0.45002	0.69807	0.72176	0.92394	||	0.19498

Accuracy and Consistency of Classifications

Grade 11 Reading

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.038048	0.01380	0.00000	0.000000	||	0.05185
Partially Meets the Standards	0.061806	0.47894	0.04911	0.000000	||	0.58984
Meets the Standards	0.000002	0.05277	0.25037	0.009296	||	0.31244
Exceeds the Standards	-0.000000	0.00000	0.01120	0.034607	||	0.04581
	0.099855	0.54551	0.31068	0.043903		0.99994

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.03965	0.01089	1.14E-7	447E-23	||	0.05055
Partially Meets the Standards	0.06441	0.37816	0.07159	3.61E-8	||	0.51415
Meets the Standards	1.73E-6	0.04167	0.36495	0.00262	||	0.40923
Exceeds the Standards	-21E-19	4.73E-8	0.01633	0.00974	||	0.02606
					||	
Marginal	0.10407	0.43072	0.45286	0.01235	||	1

accuracy	cut1	cut2	cut3
0.79249	0.92469	0.88674	0.98106

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.048363	0.05135	0.00013	0.000000	||	0.0999
Partially Meets the Standards	0.051353	0.42328	0.07083	0.000023	||	0.5455
Meets the Standards	0.000134	0.07083	0.22580	0.013885	||	0.3107
Exceeds the Standards	0.000000	0.00002	0.01389	0.029995	||	0.0439
	0.099850	0.54549	0.31065	0.043904		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.05040	0.04055	0.00020	0.000000	||	0.09115
Partially Meets the Standards	0.05352	0.33417	0.10326	0.000007	||	0.49101
Meets the Standards	0.00014	0.05592	0.32916	0.003906	||	0.38914
Exceeds the Standards	0.00000	0.00002	0.02024	0.008438	||	0.02870
	0.10406	0.43066	0.45286	0.012351		1.00000

consist	cut1	cut2	cut3	line	kappa
0.72223	0.90559	0.84045	0.97583	||	0.53893

Accuracy and Consistency of Classifications

Grade 11 Writing

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.04765	0.01651	0.00001	2.4016E-11	||	0.06416
Partially Meets the Standards	0.09711	0.46747	0.05778	.000089347	||	0.62244
Meets the Standards	0.00037	0.11047	0.19296	.009527206	||	0.31335
Exceeds the Standards	0.00000	0.00000	0.00000	0	||	0.00000
	0.14513	0.59445	0.25075	.009616554		0.99995

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.03371	0.01576	0.00001	458E-13	||	0.04948
Partially Meets the Standards	0.0687	0.44617	0.0718	0.00017	||	0.58685
Meets the Standards	0.00026	0.10545	0.2398	0.01816	||	0.36367
Exceeds the Standards	0	0	0	0	||	0
Marginal	0.10268	0.56738	0.31162	0.01833	||	1

accuracy	cut1	cut2	cut3
0.71969	0.91526	0.82231	0.98167

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.06737	0.07564	0.00213	.000002645	||	0.1452
Partially Meets the Standards	0.07564	0.41376	0.10365	.001333714	||	0.5945
Meets the Standards	0.00213	0.10365	0.13766	.007287025	||	0.2508
Exceeds the Standards	0.00000	0.00133	0.00729	.000992775	||	0.0096
	0.14514	0.59438	0.25074	.009616159		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.04765	0.07219	0.00265	0.000005	||	0.12251
Partially Meets the Standards	0.05351	0.39496	0.12878	0.002542	||	0.57983
Meets the Standards	0.00151	0.09894	0.17108	0.013887	||	0.28543
Exceeds the Standards	0.00000	0.00127	0.00905	0.001892	||	0.01222
	0.10267	0.56736	0.31157	0.018326		1.00000

consist	cut1	cut2	cut3	line	kappa
0.61561	0.87012	0.76427	0.97323	||	0.32477

Accuracy and Consistency of Classifications

Grade 11 Mathematics

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.38342	0.03802	0.00000	5.3145E-14	||	0.42145
Partially Meets the Standards	0.05957	0.31506	0.02934	.000006480	||	0.40399
Meets the Standards	0.00003	0.05031	0.12100	.003180027	||	0.17453
Exceeds the Standards	0.00000	0.00000	0.00000	0	||	0.00000
	0.44302	0.40340	0.15034	.003186507		0.99997

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.35324	0.03738	3.53E-6	143E-15	||	0.39062
Partially Meets the Standards	0.05488	0.30974	0.03643	0.00002	||	0.40107
Meets the Standards	0.00002	0.04946	0.15024	0.00858	||	0.20831
Exceeds the Standards	0	0	0	0	||	0
Marginal	0.40814	0.39659	0.18667	0.0086	||	1

accuracy	cut1	cut2	cut3
0.81322	0.90771	0.91407	0.99140

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.37506	0.06754	0.00039	.000000038	||	0.4430
Partially Meets the Standards	0.06754	0.28339	0.05219	.000234693	||	0.4034
Meets the Standards	0.00039	0.05219	0.09503	.002737522	||	0.1504
Exceeds the Standards	0.00000	0.00023	0.00274	.000214368	||	0.0032
	0.44299	0.40334	0.15035	.003186622		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.34552	0.06639	0.00049	.000000103	||	0.41245
Partially Meets the Standards	0.06223	0.27863	0.06479	.000633478	||	0.40630
Meets the Standards	0.00036	0.05130	0.11798	.007388115	||	0.17705
Exceeds the Standards	0.00000	0.00023	0.00340	.000578523	||	0.00421
	0.40811	0.39655	0.18665	.008600219		1.00000

consist	cut1	cut2	cut3	line	kappa
0.74278	0.87052	0.88220	0.98835	||	0.59648

Accuracy and Consistency of Classifications

Grade 11 Science

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.31635	0.04673	0.00000	1.564E-16	||	0.36310
Partially Meets the Standards	0.08829	0.41742	0.02981	.000000827	||	0.53552
Meets the Standards	0.00000	0.02530	0.06946	.002006054	||	0.09677
Exceeds the Standards	0.00000	0.00000	0.00133	.003190517	||	0.00452
	0.40464	0.48945	0.10060	.005197399		0.99992

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.25172	0.05331	1.32E-6	258E-18	||	0.30503
Partially Meets the Standards	0.07025	0.47622	0.0329	1.37E-6	||	0.57937
Meets the Standards	3.69E-6	0.02886	0.07668	0.00331	||	0.10886
Exceeds the Standards	417E-19	1.19E-7	0.00147	0.00527	||	0.00674
					||	
Marginal	0.32198	0.55839	0.11105	0.00858	||	1

accuracy	cut1	cut2	cut3
0.80988	0.87644	0.93823	0.99521

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.31244	0.09193	0.00028	.000000002	||	0.4047
Partially Meets the Standards	0.09193	0.35919	0.03829	.000030927	||	0.4895
Meets the Standards	0.00028	0.03829	0.05965	.002382755	||	0.1006
Exceeds the Standards	0.00000	0.00003	0.00238	.002783298	||	0.0052
	0.40465	0.48945	0.10061	.005196983		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.24860	0.10487	0.00031	.000000003	||	0.35379
Partially Meets the Standards	0.07315	0.40973	0.04226	.000051074	||	0.52526
Meets the Standards	0.00022	0.04368	0.06584	.003934860	||	0.11369
Exceeds the Standards	0.00000	0.00004	0.00263	.004596710	||	0.00726
	0.32197	0.55832	0.11104	.008582647		1.00000

consist	cut1	cut2	cut3	line	kappa
0.72883	0.82143	0.91344	0.99335	||	0.53255

Accuracy and Consistency of Classifications

Grade 11 Social Studies

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.31763	0.04252	0.00009	0.000000	||	0.36023
Partially Meets the Standards	0.05816	0.25775	0.05612	0.000057	||	0.37213
Meets the Standards	0.00014	0.03946	0.18610	0.019249	||	0.24496
Exceeds the Standards	0.00000	0.00001	0.01007	0.012505	||	0.02259
	0.37592	0.33974	0.25238	0.031811		0.99992

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.28219	0.04492	0.0001	449E-13	||	0.32721
Partially Meets the Standards	0.05167	0.27234	0.06295	0.00004	||	0.38699
Meets the Standards	0.00012	0.04169	0.20874	0.01451	||	0.26506
Exceeds the Standards	587E-13	0.00001	0.0113	0.00943	||	0.02074
					||	
Marginal	0.33398	0.35896	0.28308	0.02398	||	1

accuracy	cut1	cut2	cut3
0.77269	0.90319	0.89508	0.97414

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.30530	0.06844	0.00221	0.000001	||	0.3760
Partially Meets the Standards	0.06844	0.20651	0.06421	0.000630	||	0.3398
Meets the Standards	0.00221	0.06421	0.16599	0.019993	||	0.2524
Exceeds the Standards	0.00000	0.00063	0.01999	0.011189	||	0.0318
	0.37595	0.33979	0.25240	0.031812		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.27118	0.07230	0.00248	0.000001	||	0.34599
Partially Meets the Standards	0.06080	0.21814	0.07201	0.000475	||	0.35145
Meets the Standards	0.00196	0.06783	0.18616	0.015070	||	0.27103
Exceeds the Standards	0.00000	0.00067	0.02242	0.008432	||	0.03152
	0.33394	0.35893	0.28307	0.023978		1.00000

consist	cut1	cut2	cut3	line	kappa
0.68397	0.86245	0.85457	0.96136	||	0.53581

Accuracy and Consistency of Classifications

Grade 11 Health

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.001060	0.00077	0.00000	7.272E-15	||	0.00183
Partially Meets the Standards	0.049255	0.58240	0.10001	.000020992	||	0.73169
Meets the Standards	0.000070	0.08893	0.17590	.001550198	||	0.26642
Exceeds the Standards	0.000000	0.00000	0.00000	0	||	0.00000
	0.050386	0.67209	0.27591	.001571190		0.99994

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.00093	0.00076	3.35E-7	157E-16	||	0.00169
Partially Meets the Standards	0.043	0.57762	0.10368	0.00005	||	0.72434
Meets the Standards	0.00006	0.0882	0.18237	0.00334	||	0.27398
Exceeds the Standards	0	0	0	0	||	0
Marginal	0.04398	0.66658	0.28605	0.00339	||	1

accuracy	cut1	cut2	cut3
0.76092	0.95618	0.80801	0.99661

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.010757	0.03838	0.00125	.000000118	||	0.0504
Partially Meets the Standards	0.038376	0.50684	0.12656	.000220865	||	0.6721
Meets the Standards	0.001250	0.12656	0.14679	.001307249	||	0.2759
Exceeds the Standards	0.000000	0.00022	0.00131	.000042938	||	0.0016
	0.050383	0.67199	0.27590	.001571170		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.009390	0.03806	0.00130	.000000255	||	0.04875
Partially Meets the Standards	0.033493	0.50269	0.13120	.000476241	||	0.66796
Meets the Standards	0.001091	0.12549	0.15219	.002819061	||	0.28163
Exceeds the Standards	0.000000	0.00022	0.00136	.000092596	||	0.00167
	0.043974	0.66646	0.28604	.003388154		1.00000

consist	cut1	cut2	cut3	line	kappa
0.66446	0.92605	0.74020	0.99513	||	0.28919

Accuracy and Consistency of Classifications

Grade 11 Visual and Performing Arts

Step 4

Predicted Classification X(1)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.33295	0.27417	0.010321	0.000200	||	0.61768
Partially Meets the Standards	0.06366	0.16281	0.033585	0.003266	||	0.26331
Meets the Standards	0.00185	0.03989	0.053040	0.024158	||	0.11894
Exceeds the Standards	0.00000	0.00000	0.000000	0.000000	||	0.00000
	0.39845	0.47688	0.096945	0.027625		0.99992

Step 5

Actual Classification X(0)

tstat	Fail	Needs	Prof	Adv	line	Marg
Does Not Meet the Standards	0.35727	0.21418	0.02113	0.00001	||	0.59258
Partially Meets the Standards	0.06832	0.12719	0.06876	0.00017	||	0.26444
Meets the Standards	0.00198	0.03117	0.10859	0.00124	||	0.14298
Exceeds the Standards	0	0	0	0	||	0
Marginal	0.42757	0.37254	0.19848	0.00142	||	1

accuracy	cut1	cut2	cut3
0.59305	0.69438	0.87678	0.99858

Step 6

X(1)

tstat	Fail	Needs	Prof	Adv	line	marg1
Does Not Meet the Standards	0.19916	0.18674	0.011822	0.000723	||	0.3985
Partially Meets the Standards	0.18674	0.23886	0.042824	0.008455	||	0.4769
Meets the Standards	0.01182	0.04282	0.030331	0.011965	||	0.0970
Exceeds the Standards	0.00072	0.00846	0.011965	0.006482	||	0.0276
	0.39844	0.47688	0.096941	0.027625		1.0000

Step 7

X(0)

tstat	Fail	Needs	Prof	Adv	line	marg2
Does Not Meet the Standards	0.21371	0.14587	0.02420	.000037059	||	0.38385
Partially Meets the Standards	0.20038	0.18658	0.08768	.000433445	||	0.47510
Meets the Standards	0.01268	0.03345	0.06209	.000613332	||	0.10885
Exceeds the Standards	0.00078	0.00660	0.02449	.000332296	||	0.03221
	0.42755	0.37252	0.19846	.001416132		1.00000

consist	cut1	cut2	cut3	line	kappa
0.46273	0.61602	0.83412	0.96704	||	0.15688

APPENDIX D

DECISION RULES

Maine Educational Assessment

Decision Rules
Used for Reporting Results of the December 2002 Test Administration

Section I: General Rules

Issue	Rule #	Description	Pertinent Variables	Impact on Analyses/Aggregation	Impact on Parent Letter/Student Level Data	Impact on School/District Reports	Impact on Common Item Class Reports
Items							
Reading Items	1	Common	Form = 0 in IREF	Used to compute scaled scores, standard errors, and subscore information for individual students. Also used in computing subscores for school and district reports. Included in the criterion score for the item analyses.	Included in computing scaled scores, standard errors, and subscore information.	Included in computing subscores.	Item level scores of students in these items, and item difficulty summaries for class, school, district, and state are reported. Each multiple-choice item is reported as a "+" if correct and the response letter (A, B, C, or D) if incorrect. Blanks are reported as blanks and a multiple response is reported as "*". For constructed-response questions the number of points obtained is reported unless the students did not respond (reported as "B").
	2	Matrix	Form ne 0 in IREF	Used to compute subscores for school and district reports. Included in the criterion score for item analyses, except for common items. Some are equating items, and those items were used to equate scores from year to year.	None.	Included in computing subscores.	None.

Issue	Rule #	Description	Pertinent Variables	Impact on Analyses/Aggregation	Impact on Parent Letter/Student Level Data	Impact on School/District Reports	Impact on Common Item Class Reports
	3	Embedded FT	FT = "1" in IREF	Not used reporting MEA results. Included in the criterion score for item analyses for FT items only.	None.	Not included in computing subscores.	None.
Writing Items	4	Writing Prompt and Reading Item 30 (both common)	WP scores = Style1, style2	Used to compute scaled scores, standard errors, and subscore information for individual students. Also used in computing subscores for school and district reports.	Included in computing scaled scores, standard errors, and subscore information.	Included in computing subscores.	Item level scores of students in these items, and item difficulty summaries for class, school, district, and state are reported.
Health Education Items	5	Matrix	Form ne 0 in IREF (all items)	Used to compute subscores for school and district reports. Included in the criterion score for item analyses. Some are equating items, and those items were used to equate scores from year to year.	N/A	Included in computing subscores.	N/A
	6	Embedded FT	FT = "1" in IREF	Included in the criterion score for item analyses for FT items only.	N/A	Not included in computing subscores.	N/A
School Type							
Public Schools	7	Public schools that participated in the MEA (Public schools are required to participate in the MEA.)	Schstatus = "1"	Students from these schools are included in all state aggregation and all aggregation pertaining to the respective districts to which they belong unless otherwise dictated by other rules in this document.	Students in these schools will receive all information called for in the report unless otherwise dictated by other rules in this document.	Schools receive school reports unless otherwise dictated by other rules in this document. Data from these schools are used to compute district level data.	All pieces of information are provided.

Issue	Rule #	Description	Pertinent Variables	Impact on Analyses/Aggregation	Impact on Parent Letter/Student Level Data	Impact on School/District Reports	Impact on Common Item Class Reports
"Big 11" Schools	8	Private schools receiving state funding that participated in the MEA	Schstatus = "2"	Students from these schools are included in all state aggregation unless otherwise dictated by other rules in this document. Students in these schools are not included in any district level aggregation	All district level information will be blank (i.e., district scaled score average and district name).	Schools receive school reports unless otherwise dictated by other rules in this document, but students from these schools are not included in any district level aggregation.	Fields showing district level information will be blank (i.e., district level summaries and district name).
Private Schools	9	Private schools that participated in the MEA	Schstatus = "3"	Students from these schools will not be included in any district or state level aggregation except for the state level participation report.	All district level information will be blank (i.e., district scaled score average and district name).	Schools receive school reports unless otherwise dictated by other rules in this document, but students from these schools are not included in any district level aggregation.	Fields showing district level information will be blank (i.e., district level summaries and district name).
Exclusions							
Home Schooled	10	Home schooled students who participated in the MEA	Home = "1"	Home schooled students will not be included in any class, school, district, or state level aggregation except for the state level participation report.	Students will receive scaled scores and subscore information. There will be no school or district data, but there will be state data. In the school name field it should say "Home School" and in the district name field should be the name of the district of the school where the student took the test.	Students will not be included in any school or district level reports.	Each student will be reported in a separate class. There will be no class, school, or district level summaries. State level summaries will be provided. In the school name field it should say "Home School" and in the district name field should be the name of the district of the school where the student took the test. The class name field should be left blank. There will be an asterisk beside his/her name to indicate that he/she had been excluded in the computation for state level summaries.

Issue	Rule #	Description	Pertinent Variables	Impact on Analyses/Aggregation	Impact on Parent Letter/Student Level Data	Impact on School/District Reports	Impact on Common Item Class Reports
Did Not Participate (Specific to Content Area)	11	Student was marked as did not participate for a content area	DNPrea = "1" DNPwri = "1" DNPhea = "1"	Student is not included in any class, school, or district level aggregation of all types of scores or performance level for that content area.	Each student in this category will receive a report. Fields pertaining to that student's scores for the content area will be blank. In the performance level field it will say "Did Not Participate."	Student will not be included in any school or district level aggregation of any type of scores or performance level for that content area.	Each student in this category will be listed in the common item report under the class, school, and district indicated in his/her data. There will be an asterisk beside his/her name to indicate that he/she had been excluded in the computation for the class, school, district, and state level summaries. For these students the raw score field (i.e., "Points Earned") will say "DNP" and the scaled score and performance level fields will be blank.
Tested Incomplete (Specific to Content Area)	12	Student did not attempt at least one question in each session for a content area.[1]	TIrea = "1" TIwri = "1" TIhea = "1"	Student will not be included in any class, school, or district level aggregation of all types of scores or performance level for that content area.	Each student in this category will receive a report. Fields pertaining to that student's scores for the content area will be blank. In the performance level field it will say "Tested Incomplete."	Student will not be included in any school or district level aggregation of any type of scores or performance level for that content area.	Each student in this category will be listed in the common item report under the class, school, and district indicated in his/her data. There will be an asterisk beside his/her name to indicate that he/she had been excluded in the computation for the class, school, district, and state level summaries. For these students the raw score field (i.e., "Points Earned") will say "TI" and the scaled score and performance level fields will be blank.

[1] For the writing assessment, each of the two prompts is considered a content area and a "Blank" flag is the indicator of not attempting. A student with a "Not Scorable" flag for a prompt is considered to have attempted that prompt and will not receive a "TI" exclusion based on that prompt.

Home School **and** Did Not Participate (Specific to Content Area)	13	Home schooled student who was marked as did not participate for a content area	Home = "1" and DNPrea = "1" DNPwri = "1" DNPhea = "1"	These students will not be included in any class, school, district, or state level aggregation except for the state level participation report.	Each student in this category will receive a report. Fields pertaining to that student's scores for the content area will be blank. In the performance level field it will say "Did Not Participate." There will be no school or district data, but there will be state data. In the school name field it should say "Home School" and in the district name field should be the name of the district of the school where the student took the test.	Students will not be included in any school or district level reports.	Each student will be reported in a separate class. There will be no class, school, or district level summaries. State level summaries will be provided. In the school name field it should say "Home School" and in the district name field should be the name of the district of the school where the student took the test. The class name field should be left blank. There will be an asterisk beside his/her name to indicate that he/she had been excluded in the computation for state level summaries. For these students the raw score field (i.e., "Points Earned") will say "DNP" and the scaled score and performance level fields will be blank.

Home School **and** Tested Incomplete (Specific to Content Area)	14	Home schooled student who did not attempt at least one question in a each session for a content area	Home = "1" And TIrea = "1" TIwri = "1" TIhea = "1"	These students will not be included in any class, school, district, or state level aggregation except for the state level participation report.	Each student in this category will receive a report. Fields pertaining to that student's scores for the content area will be blank. In the performance level field it will say "Tested Incomplete." There will be no school or district data, but there will be state data. In the school name field it should say "Home School" and in the district name field should be the name of the district of the school where the student took the test.	Students will not be included in any school or district level reports.	Each student will be reported in a separate class. There will be no class, school, or district level summaries. State level summaries will be provided. In the school name field it should say "Home School" and in the district name field should be the name of the district of the school where the student took the test. The class name field should be left blank. There will be an asterisk beside his/her name to indicate that he/she had been excluded in the computation for state level summaries. For these students the raw score field (i.e., "Points Earned") will say "TI" and the scaled score and performance level fields will be blank.
Did not Participate **and** Tested Incomplete	15	Student who was marked as did not participate in a content area and did not attempt at least one question in each session in that content area	DNPrea = "1" and Tirea = "1" DNPwri = "1" and Tiwri = "1" DNPhea = "1" and Tihea = "1"	Student will not be included in any class, school, or district level aggregation of all types of scores or performance level for that content area.	Each student in this category will receive a report. Fields pertaining to that student's scores for the content area will be blank. In the performance level field it will say "Did Not Participate."	Student will not be included in any school or district level aggregation of any type of scores or performance level for that content area.	Each student in this category will be listed in the common item report under the class, school, and district indicated in his/her data. There will be an asterisk beside his/her name to indicate that he/she had been excluded in the computation for the class, school, district, and state level summaries. For these students the raw score field (i.e., "Points Earned") will say "DNP" and the scaled score and performance level fields will be blank.

Home School **and** Did Not Participate **and** Tested Incomplete	16	Home schooled student who was marked as did not participate in a content area and did not attempt at least one question in each session in that content area	Home = "1" and DNPrea = "1" and Tirea = "1" DNPwri = "1" and Tiwri = "1" DNPhea = "1" and Tihea = "1"	These students will not be included in any class, school, district, or state level aggregation except for the state level participation report.	Each student in this category will receive a report. Fields pertaining to that student's scores for the content area will be blank. In the performance level field it will say "Did Not Participate." There will be no school or district data, but there will be state data. In the school name field it should say "Home School" and in the district name field should be the name of the district of the school where the student took the test.	Students will not be included in any school or district level reports.	Each student will be reported in a separate class. There will be no class, school, or district level summaries. State level summaries will be provided. In the school name field it should say "Home School" and in the district name field should be the name of the district of the school where the student took the test. The class name field should be left blank. There will be an asterisk beside his/her name to indicate that he/she had been excluded in the computation for state level summaries. For these students the raw score field (i.e., "Points Earned") will say "DNP" and the scaled score and performance level fields will be blank.

Number of Students[2]							
Number of Students in School [District]	17	Less than five (<5)	Ntotal	No analysis will be performed except for item level summary data for the common item reports.	There will be no school [district] level data reported	No report will be generated for the school [district]	No impact.
		Five or more (≥5)	Ntotal	Other analyses will be performed depending on the number of **included** students in each content area. (See the two rules immediately below.)	Inclusion of school [district] level data will be dependent on the number **included** students, which is specific to content area. (See the two rules immediately below.)	A report will be generated for the school [district] and there will be data in the school [district] level participation summary. There might or might not be data that are content specific depending on the number of **included** students for the content area. (See the two rules immediately below.)	No impact.
Number of **Included** Students in School [District] (Specific to Content Area)	18	Less than five (<5)	Nincl	No content area specific aggregation will be performed except for item level summary data for the common item reports	There will be no school [district] level data reported for the content area	There will be no school [district] level data reported for the content area	No impact.
		Five or more (≥5)	Nincl	All school [district] level aggregation of scaled scores and performance level will be done	School [district] level data will be reported for the content area	School [district] level data will be reported for the content area	No impact.

[2] Note that the rules on the (1) number of students, (2) number of included students, and (3) number of students in Reporting Category (or Questionnaire Items) are applied hierarchically. That is, the rule on the number of students in a reporting category is only relevant if there are five or more included students in the content area, and the rule on the number of included students on the content area is only relevant if there are five or more students in the school [district].

Number of Students in a **Reporting Category**[3]	19	Less than five (<5)		Count, scaled score, and performance level summaries **not** computed or reported for students in the category	N/A	The whole line for that category is left blank	N/A
		Five or more (≥5)		Count, scaled score, and performance level summaries computed and reported for students in the category	N/A	The whole line for that category is filled with the appropriate information	N/A
Number of Students in a **Questionnaire Response Category**	20	Less than five (<5)		No impact.	N/A	No impact.	N/A
		Five or more (≥5)		No impact.	N/A	No impact.	N/A

[3] Percentages across categories should sum up to 100% (withstanding rounding errors) except for categories under **Language minority/LEP students**, **Migrant**, and **Title I**.

Section II: Rules on Reporting Student Participation[4]

Report table section	Percentage meaning	Percentage calculation	Example	Zero and blank percentages
Enrollment	This is the percentage of enrolled students in each category	# students in category / # enrolled students	# white students = 80 # black students = 0 # Asian students = 20 # enrolled students = 100 % white = 80 % black = 0 % Asian = 20	If the number of students in a category is 0 then the percentage is 0. No percentages are left blank.
Content area participation	Percentage of students in each category who participated in each content area	# students in category who participated in content area / # students in category	# total participated reading = 60 # white students participated in reading = 60 # black students participated in reading = 0 # Asian students participated in reading = 0 % white participated = 75 % black participated = 0 % Asian participated = 0	If the number of enrolled students in a category in 0 then the participation percentage is left blank. If the number of students who participated = 0 and the number of enrolled students does not = 0, then the participation percentage = 0.

[4] Summary of Student Participation in not content specific.

Mode of participation				
Test mode (accommodation, alt., ...)	Percentage of students in each content area who participated with each mode of participation	# students tested with mode in content area / # students who participated in content area	# tested in reading without accommodations = 50 # tested in reading with accommodations = 10 # Alt assessed = 0 % w/o accommodations = 83 % w/ accommodations =17 % Alt assessed = 0	If the number of students in a mode is 0, the percentage is 0. No percentages are left blank.
Test mode reason (LEP, 504 Plan...)	Percentage of students with selected reason and who participated with a given mode for that content area	# students with selected reason and tested with mode in content area / # students tested with mode in content area	Accommodations: # LEP = 10, % LEP = 100 # 504plan = 0, % 504plan = 0 # Disability = 1, % Disability = 10 Alt assessed: # LEP = 0, % LEP = 0 # 504plan = 0, % 504plan = 0 # Disability = 0, % Disability = 0	If the number of students in a mode is 0, then all of the reason percentages are left blank. If the number of students in a mode is not 0 then any reason that have 0 students have a percentage of 0.

APPENDIX E

QUALITY ASSURANCE CHECK LISTS

Parent Report Quality Assurance Check List

District _____ Grade ____ Reviewer _____ Date _____

Review Steps – Complete each time the files are run	**Date(s) Step Completed**	**Comments**	**Date Prerelease Final Review Completed**
1. Compare the number of reports to the number of students in the file received from data processing. There should be one report for each student. (Check Decision Rules)			
2. Review/Proof the letter side of the report and compare to the shell			
3. On the letter side, check the bottom right corner box showing the State Summary Results. a. Match the percentages to the preliminary state numbers. b. Make sure the bar graph lines up with the scale. c. Review the placement of the bars and numbers to be sure everything is within the box and looks appropriate.			
4. Review/proof the performance side text and match to the shell.			

Parent Report Quality Assurance Check List

District _____ Grade ____ Reviewer _____ Date _____

Specific Review Steps – Complete in depth the first time the file is run – thereafter match initial review data that should not have changed to the new file and check the corrected data in depth	**School** **Rev Date**	**School** **Rev Date**	**School** **Rev Date**	**School** **Rev Date**	**School** **Rev Date**
1. Match the following "Parent Report" elements to the corresponding elements in the "Common Item Class Report" for each content area. Note: The "Common Item Class Report" review should be completed before the "Parent Report" review. a. Student Name b. Student Grade c. School d. District e. Performance Level f. Scaled Score – three places 1. Numeric score 2. Visual - Diamond 3. Visual – bottom of bar in bar graph					
2. Verify that each student listed on the "Common Item Class Report" has a "Parent Report".					
3. For students who have TI or DNP on the "Common Item Class Report" a. Make sure that the student has no scaled score, performance level, diamonds and standard error bar, bar on bar graph or sub score diamonds. (Check Decision Rules for exceptions) b. Ensure the report has the correct notation. (Check Decision Rules)					
4. Match the School and District average scaled scores to the averages computed from the Common Item Report and the pre report calculation work.					
5. Match the State Average to the preliminary state numbers.					
6. Review the placement of the diamonds for the student scaled scores. Make sure they line up with the scale.					
7. Review height of the bar graphs for the average scaled scores. Make sure the height lines up with the scale.					
8. Using the standard error from the psychometrician, check the length					

Parent Report Quality Assurance Check List

District _____ Grade ____ Reviewer _____ Date _____

Specific Review Steps – Complete in depth the first time the file is run – thereafter match initial review data that should not have changed to the new file and check the corrected data in depth	**School** **Rev Date**	**School** **Rev Date**	**School** **Rev Date**	**School** **Rev Date**	**School** **Rev Date**
and placement of the student standard error line through the student scaled score diamond.					
9. Using the sequel table or the recalculated sub categories for the student check the placement of the subcategory diamonds on the report.					
10. For Private Schools, there should be no district information. (Check Decision Rules)					
11. Schools with less than 5 students tested should have no School information. (Check Decision Rules)					
12. Districts with less than 5 students tested should have no District information. (Check Decision Rules)					
13. Home Schooled students should have student and state information only. School and District information should be blank. (Check Decision Rules)					

Label Quality Assurance Check List

District _____ Grade ____ Reviewer _____ Date _____

General Label Quality Review Check List

Review Steps – Complete each time the file is run	**Date(s) Step Completed**	**Comments**	**Date Prerelease Final Review Completed**
1. Proof text and format of the label. Match to approved shell			
2. Make sure the same number of pages is in the file each time the file is run.			
3. Page through the file and check to see that each time the school name changes a new page is started.			

Label Quality Assurance Check List

District _____ Grade ____ Reviewer _____ Date _____

Specific Label Quality Review Check List

General Review Steps – Complete steps in depth the first time the file is reviewed – thereafter, match initial review to new file to ensure correct data has not changed.	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**
1. Match the school and district information to the corresponding Common Item Report(s)									
2. Compare the number of Student Labels to the number of students listed on the Common Item Report(s) for the School. The numbers should match.									
3. Make sure the grade and the test administration date are correct.									
4. For each student, match the scaled scores and proficiency levels to the Common Item Report(s). They should be the same.									
5. Check to see that Home Schooled students appear at the end of the school and not in alphabetical order within the school.									

MEA Common Item Class Report Quality Assurance Check List

District _____ Grade ____ Reviewer _____ Date _____

Review Steps – Complete each time the files are run.	Date(s) Step Completed	Comments	Date Prerelease Final Review Completed
1) Proof text and format of report, including legend if included in the file. Compare to shell.			
2) Compare "Content Standard & Performance Indicator" in the column heading area to I-Ref* or information supplied by the Program Manager			
3) Compare "Item Type" in the column heading area to I-Ref spreadsheet.			
4) Compare "Correct Multiple Choice Response" in the column heading area to I-Ref spreadsheet.			
5) Compare "Total Possible Points" in the column heading area to I-Ref spreadsheet.			
6) Compare total number of pages in the file to other Common Item files for the grade. All should have the same number of pages. The number of pages should not change from run to run unless students are added, assigned to different schools, or a school/district is added or deleted.			
7) Page through the PDF file and make sure the page numbers on the reports are sequential, e.g. 1 of 5, etc.			
8) Review the private schools and make sure there is no data in the district line.			
9) Check the State "Percent Correct/Avg. Score" to the State numbers computed on the spreadsheet. This information should not change from run to run as State data is frozen. Check with department manager if it does and document the reason.			

*I-Ref is the proprietary item bank relational database developed by Measured Progress.

MEA Common Item Class Report Quality Assurance Check List

District _____ Grade ____ Reviewer _____ Date _____

Specific Review Steps – Complete in depth the first time the file is run – thereafter match initial review data that should not have changed to the new file and check the corrected data in depth	**Sch (Num) Class (Name)** **Rev Date**	**Sch (Num) Class (Name)** **Rev Date**	**Sch (Num) Class (Name)** **Rev Date**	**Sch (Num) Class (Name)** **Rev Date**	**Sch (Num) Class (Name)** **Rev Date**	**Sch (Num) Class (Name)** **Rev Date**	**Sch (Num) Class (Name)** **Rev Date**	**Sch (Num) Class (Name)** **Rev Date**	**Sch (Num) Class (Name)** **Rev Date**
1) Make sure the identifying information in the upper right hand box is complete. There should be information for Code, School, Date, Group Size, and Page. Only public schools will reflect a District Name and Class is an optional field.									
2) Check the home schooled list. If a student appears on the list for the school under review there should be a separate Common Item Report with the class indicated as "Home Schooled".									
3) Verify student names appear in alphabetical order in-groups of 5.									
4) Verify the Group Size by counting up the number of students.									
5) Verify the page numbers for each class and that all the pages are present.									
6) Highlight, with a yellow marker, each student listed on the exclusion list for the content area and class under review. If there is a "1" in the DNP column, there should be no "Points Earned", "Scaled Score", or "Performance Level" for these students. Instead, there should be a "DNP" in the "Points Earned" column.									
7) If a student's name appears on the exclusion list with a "1" in the "TI" column, there should be no "Points Earned", "Scaled Score", or "Performance Level" for this student. Instead, there should be a "TI" in the "Points Earned" column.									
8) Make sure each highlighted student has an "§" after his or her name.									
9) Count up the number of students that were highlighted									

MEA Common Item Class Report Quality Assurance Check List

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and subtract that number from the Group Size. Cross out the group size number and replace with the new number.									
10) Count up the number of pluses across the page for every third student starting randomly. Skip students whose rows you highlighted. Add the numerical scores to the total pluses and match your answer to the Points Earned for the student. It should be the same number you just calculated. If a student did not finish enough of the exam the "Points Earned" column will have a "TI".									
11) For each student in the above step, match the "Points Earned" to the conversion table to verify that the Scaled Score is correct. Then match the Scaled Score to the Performance level abbreviation to verify it is correct. ➢ 501 – 520 = D ➢ 521 – 540 = P ➢ 541 – 560 = M ➢ 561 – 580 = E									
12) For each "MC" "Item Type", review the "Item Number" column and make sure that no letters in the column match the "Correct MC Response". For example, if the "Correct MC Response" is "C" there should be no "C" in the column below.									
13) For each Item Type "SA" or "CR", review the numbers in the column and make sure none exceed the "Total Possible Points" for the column.									
14) Complete the appropriate attached form for ELA Writing by school. Note: All counts should exclude highlighted rows.									

MEA Common Item Class Report Quality Assurance Check List

District _____ Grade ____ Reviewer _____ Date _____

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A) For each school – complete each step and indicate the results on the attached form.									
1) Indicate the number of students in each class adjusted for the exempt status (DNP and TI).									
2) Add the points in the "Writing Prompt" subcategory columns for the entire class									
3) Add the points in the "Extended Response" subcategory columns for the entire class									
4) Add the points in the "Total Writing" subcategory columns for the entire class									
5) Count up the total number of "E's", "M's", "P's", and "D's" in the "Performance Level Column"									
6) Add up the Scaled Scores for the entire class									
B) Total each column to get a school total.									
C) On one sheet, total all the schools to get a district total.									
D) Divide each column total by the Total Number of Students (Total Minus Highlighted) on both the school and district level to get the percent or average score.									
E) Match the Class, School and District percents or averages to the Common Item question on the report to verify the report is correct.									
15) Complete the appropriate attached form for Reading, Math, Science and Social Studies. Note: All counts should exclude highlighted rows.									
A) For each school – complete one form for each content area. Complete each step and indicate the results on the attached form.									

MEA Common Item Class Report Quality Assurance Check List

District _____ Grade ____ Reviewer _____ Date _____

Specific Review Steps – Complete in depth the first time the file is run – thereafter match initial review data that should not have changed to the new file and check the corrected data in depth	**Sch (Num) Class (Name)** **Rev Date**	**Sch (Num) Class (Name)** **Rev Date**	**Sch (Num) Class (Name)** **Rev Date**	**Sch (Num) Class (Name)** **Rev Date**	**Sch (Num) Class (Name)** **Rev Date**	**Sch (Num) Class (Name)** **Rev Date**	**Sch (Num) Class (Name)** **Rev Date**	**Sch (Num) Class (Name)** **Rev Date**	**Sch (Num) Class (Name)** **Rev Date**
1) Indicate the number of students in the class adjusted for the exempt students.									
2) Pick question columns as indicated on the form. Be sure to pick the same columns for each class and school in a district. Vary the start column number by district so that all of the columns are chosen in the sample.									
3) For each column chosen count the number of "+'s" or add up the number of points depending on the column									
4) Count up the total number of "E's", "M's", "P's", and "D's" in the "Performance Level Column"									
5) Add up the Scaled Scores for the entire class									
B) Total the classes for each column to get a school total.									
C) On one sheet, total all the schools to get a district total.									
D) Divide each column total by the Total Number of Students (Total Minus Highlighted) on both the school and district level to get the percent or average score.									
E) Match the Class, School and District percents or averages each the Common Item question to the report to verify the report is correct.									
F) Match all numbers computed to the spreadsheet numbers.									
G) Match all summary and individual student results to the spreadsheet.									

MEA Common Item Class Report Quality Assurance Check List

District _____ Grade ____ Reviewer _____ Date _____

ELA Writing

School_____
Name/Number

Class (Name)	Num. Stud. (Total Minus Highlighted)	Writing Prompt Total Points			Extended Response Question Total Points			Total Writing			Total Num. of "E's"	Total Num. of "M's"	Total Num. of "P's"	Total Num. of "D's"	Scaled Score Total
		Stylistic & Rhetorical	Standard English	Total	Stylistic & Rhetorical	Standard English	Total	Stylistic & Rhetorical	Standard English	Total					
School Tot / Percent															
District Tot / Percent															

MEA Common Item Class Report Quality Assurance Check List

District _____ Grade ____ Reviewer _____ Date _____

ELA Reading, Math, Science, or Social Studies

School _____
Name/Number

Class (Name)	Number of Students (Total Minus Highlighted	Pick an item number between 1 and 4 on the Common Item Report. Write the number in the first column below. Then write the number of every 3rd question after that. Add up the total number of "+" in each under the item number on the Common Item Report and post it below.										Total Number of "E's"	Total Number of "M's"	Total Number of "P's"	Total Number of "D's"	Scaled Score Total
School Total / Percent																
District Total / Percent																

MEA Reading and Writing School and District Reports Quality Assurance Checklist

District: _____ Grade: _____ Reviewer: _____ Date: _____

General Checklist

Review Steps – Complete each time the file is run	**Date(s) Step Completed**	**Comments**	**Date Prerelease Final Review Completed**
1. Check the number of pages in the file. It should not change from run to run.			
2. Proofread and match to approved DOE shell – Only do an in depth review on the first run - scan subsequent runs for obvious formatting issues.			
3. Scan through the file and check the page numbering. This is head to head duplex printed. Make sure the numbers are in the correct place and there is a blank page between reports if necessary.			
4. Make sure the Test Date on Page 1 is correct.			
5. Make sure there are no grid lines on the bar graphs on page 2.			

MEA Reading and Writing School and District Reports Quality Assurance Checklist

District: _____ Grade: _____ Reviewer: _____ Date: _____

Specific Checklist

Specific Review Steps – Complete in depth the first time the file is run – thereafter match initial review data that should not have changed to the new file and check the corrected data in depth – Note: On pages where there is school, district and State information all columns will be filled in on the School Report. On the District Report the School columns are blank. The plan will refer to these pages in steps as School/District data. On the School Report there are pages with school and State data. On the District Report there are pages with district and State data. The plan will refer to this in steps as School or District data.	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Dist** **Rev Date**
1. Using the "Common Item Class Report" match the identifying information on the cover page – ID (School or District Number), School, District, Grade, and Test Date									
2. Verify that the same identifying information is in the box in the upper right hand corner of every page – School (only on School Report), District, Grade, and Date									
3. Page 2: Executive Summary of School, District, and State Scores Box									
a. Using prior year reports, verify that the School/District/State Average Performance Scores for prior years for all content areas match.									
b. Using the "Common Item Class Report" review worksheets, verify that the School/District average Scores are correct.									
c. Using the State average scores verify that the State scores are correct. Note: the State scores should be frozen and not change during the review.									
d. Compute the "Cum. Avg." for School/District/State for each content area by adding the three years of scores and dividing by 3 (straight average). Verify that the averages on the report are correct.									
4. Page 2: Review the Bar Graphs.									
a. For Reading and Writing compare the performance percents for the school and district to the performance percents computed from the data on the "Common Item" Reports.									

MEA Reading and Writing School and District Reports Quality Assurance Checklist

District: _____ Grade: _____ Reviewer: _____ Date: _____

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b. For Health Education and State data, check with the psychometrician for the numbers. Check the placement of the bar and make sure it matches the scale.									
5. Page 3: Summary of Student Participation									
a. For each category listed on the page at the state, school, and district level, refer to the pre reporting spreadsheet prepared in advance for the number and percent for each category at the school and district level. Verify that the number reflected in the report matches the number computed.									
6. Pages 4 & 6 Reading/Writing Results – Students at each performance level									
a. Using the worksheets prepared from the "Common Item Class Report," verify the number and percent for each performance level are correct for the current year for the State, School, and District.									
7. Pages 4, 6, & 8 Reading/Writing/Health Results – Students at each Performance Level									
a. Using the previously gathered historical data, verify the number and percent for each performance category for each year is correct for the School, District and State.									
b. Check the State percent for the current year for each performance category									
c. Calculate the cumulative average at each performance level. This is a straight average.									
d. Add the performance percents for each year for School, District and State. The total should fall									

MEA Reading and Writing School and District Reports Quality Assurance Checklist

District: _____ Grade: _____ Reviewer: _____ Date: _____

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between 99 and 101.									
e. Compare the performance percents for the current year to the bar graphs on page 2. They should be the same.									
The following steps will be completed based on time available. They will be completed for at least one multi school District.									
8. Pages 4, 6, & 8 Reading/Writing/Health Results – Learning Results Content Standards for School or District									
a. Calculate the number of points possible for each sub category. Verify that it is the same number shown in the "Number of Points Possible" column for each sub category.									
b. Using the converted file sample, add up the total number of correct answers for the category questions and divide by the number of students tested. This number should appear in the "N" column for school and district.									
c. Divide the average number correct by the total number of possible points for the category. Multiply the result by 100. This will give you the number in the "%" column for school/district.									
d. Using the spreadsheet, verify that the State Learning Results numbers are correct.									
9. Pages 5, 7, & 9 – Reporting Categories									
a. Using the spreadsheet results for the state, district and school verify as correct:									
1. The percent of students in the category									
2. The average scaled score									

MEA Reading and Writing School and District Reports Quality Assurance Checklist

District: _____ Grade: _____ Reviewer: _____ Date: _____

Specific Review Steps – Complete in depth the first time the file is run – thereafter match initial review data that should not have changed to the new file and check the corrected data in depth – Note: On pages where there is school, district and State information all columns will be filled in on the School Report. On the District Report the School columns are blank. The plan will refer to these pages in steps as School/District data. On the School Report there are pages with school and State data. On the District Report there are pages with district and State data. The plan will refer to this in steps as School or District data.	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Dist** **Rev Date**
3. The percent that meet or exceed the standard									
4. The percent that partially meets the standard									
5. The percent that does not meet the standard									
6. Based on the decision rules and calculation method, where possible, verify that the percentages add up to between 99 and 101.									
10. Pages 5, 7, & 9 – Questionnaire Items									
a. Using the spreadsheet for each content area and the calculation method specified in the decision rules, calculate the percent of students who chose each response to a question. Verify the state results.									

MEA Reading and Writing School and District Reports Quality Assurance Checklist

District: _____ Grade: _____ Reviewer: _____ Date: _____

Specific Checklist

Specific Review Steps – Complete in depth the first time the file is run – thereafter match initial review data that should not have changed to the new file and check the corrected data in depth – Note: On pages where there is school, district and State information all columns will be filled in on the School Report. On the District Report the School columns are blank. The plan will refer to these pages in steps as School/District data. On the School Report there are pages with school and State data. On the District Report there are pages with district and State data. The plan will refer to this in steps as School or District data.	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Sch Num** **Rev Date**	**Dist** **Rev Date**
1. Using the "Common Item Class Report" match the identifying information on the cover page – ID (School or District Number), School, District, Grade, and Test Date									
2. Verify that the same identifying information is in the box in the upper right hand corner of every page – School (only on School Report), District, Grade, and Date									
3. Page 2: Executive Summary of School, District, and State Scores Box									
a. Using prior year reports, verify that the School/District/State Average Performance Scores for prior years for all content areas match.									
b. Using the "Common Item Class Report" review worksheets, verify that the School/District average Scores are correct.									
c. Using the State average scores verify that the State scores are correct. Note: the State scores should be frozen and not change during the review.									
d. Compute the "Cum. Avg." for School/District/State for each content area by adding the three years of scores and dividing by 3 (straight average). Verify that the averages on the report are correct.									
4. Page 2: Review the Bar Graphs.									
a. For Reading and Writing compare the performance percents for the school and district to the performance percents computed from the data on the "Common Item" Reports.									
b. For Health Education and State data, check with									

MEA Reading and Writing School and District Reports Quality Assurance Checklist

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the psychometrician for the numbers. Check the placement of the bar and make sure it matches the scale.									
5. Page 3: Summary of Student Participation									
a. For each category listed on the page at the state, school, and district level, refer to the pre reporting spreadsheet prepared in advance for the number and percent for each category at the school and district level. Verify that the number reflected in the report matches the number computed.									
6. Pages 4 & 6 Reading/Writing Results – Students at each performance level									
a. Using the worksheets prepared from the "Common Item Class Report," verify the number and percent for each performance level are correct for the current year for the State, School, and District.									
7. Pages 4, 6, & 8 Reading/Writing/Health Results – Students at each Performance Level									
a. Using the previously gathered historical data, verify the number and percent for each performance category for each year is correct for the School, District and State.									
b. Check the State percent for the current year for each performance category									
c. Calculate the cumulative average at each performance level. This is a straight average.									
d. Add the performance percents for each year for School, District, and State. The total should fall between 99 and 101.									

MEA Reading and Writing School and District Reports Quality Assurance Checklist

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e. Compare the performance percents for the current year to the bar graphs on page 2. They should be the same.									
The following steps will be completed based on time available. They will be completed for at least one multi school District.									
8. Pages 4, 6, & 8 Reading/Writing/Health Results – Learning Results Content Standards for School or District									
a. Calculate the number of points possible for each sub category. Verify that it is the same number shown in the "Number of Points Possible" column for each sub category.									
b. Using the converted file sample, add up the total number of correct answers for the category questions and divide by the number of students tested. This number should appear in the "N" column for school and district.									
c. Divide the average number correct by the total number of possible points for the category. Multiply the result by 100. This will give you the number in the "%" column for school/district.									
d. Using the spreadsheet, verify that the State Learning Results numbers are correct.									
9. Pages 5, 7, & 9 – Reporting Categories									
a. Using the spreadsheet results for the state, district and school verify as correct:									
1. The percent of students in the category									
2. The average scaled score									

MEA Reading and Writing School and District Reports Quality Assurance Checklist

District: _____ Grade: _____ Reviewer: _____ Date: _____

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3. The percent that meet or exceed the standard									
4. The percent that partially meets the standard									
5. The percent that does not meet the standard									
6. Based on the decision rules and calculation method, where possible, verify that the percentages add up to between 99 and 101.									
10. Pages 5, 7, & 9 – Questionnaire Items									
a. Using the spreadsheet for each content area and the calculation method specified in the decision rules, calculate the percent of students who chose each response to a question. Verify the state results.									

APPENDIX F

STANDARD SETTING

STANDARD SETTING

The Maine Department of Education, in an 18-month process with extensive input from educators and policy makers throughout the state, created four performance levels to describe student achievement:

- Does Not Meet the Standards,
- Partially Meets the Standards,
- Meets the Standards, and
- Exceeds the Standards.

Four policy considerations the department set for performance standards were that they be

- concrete,
- consistent,
- challenging, and
- obtainable.

The process used to determine the MEA scores necessary for each performance level was developed with these policy considerations in mind. Two sources of data were gathered.

- Twenty-one panels consisting of about 300 educators, parents, businesspeople, and policy makers systematically looked at samples of student work and rated the work against the four Maine performance level descriptors.
- About 5,000 additional teachers rated student classroom work against those same performance level descriptors.

The results of these two approaches were averaged and then adjusted to minimize any inconsistency of the standards across the different grade levels. This last adjustment was accomplished by averaging the results for each grade with the results for the other two grades. The

effect of this adjustment was kept small by counting the results of the grade under consideration four times as heavily as the results of either of the other grades.

PERFORMANCE LEVELS DEFINITIONS

The following charts contain the content-specific performance level definitions.

CHART F-1
READING

Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in English language arts (reading). The work demonstrates exemplary accomplishment in the comprehension of literary and informational texts, in the use of the skills and strategies of reading to answer questions, and in the demonstration of understanding of how words and images communicate. (Scaled scores: 561–580.)

Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in English language arts (reading). The work demonstrates a consistent accomplishment in the comprehension of literary and informational texts, in the use of the skills and strategies of reading to answer questions, and in the demonstration of understanding of how words and images communicate. (Scaled scores: 541–560.)

Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in English language arts (reading). The work demonstrates inconsistent accomplishment in the comprehension of literary and informational texts, in the use of the skills and strategies of reading to answer questions, and in the demonstration of understanding of how words and images communicate. (Scaled scores: 521–540.)

Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in English language arts (reading). The work demonstrates limited accomplishment in the comprehension of literary and informational texts, in the use of the skills and strategies of reading to answer questions, and in the demonstration of understanding of how words and images communicate. (Scaled scores: 501-520.)

CHART F-2
WRITING

Exceeds the Standards—The quality of a student's written compositions at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in English language arts (writing). The student's work demonstrates exemplary accomplishment in both the development of the topic/idea and the use of Standard English conventions in first-draft writing. (Scaled scores:561–580.)

Meets the Standards—The quality of a student's written compositions at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in English language arts (writing). The student's work demonstrates proficiency in both the development of the topic/idea and the use of Standard English conventions in first-draft writing. (Scaled scores:541–560.)

Partially Meets the Standards—The quality of a student's written compositions at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in English language arts (writing). The student's work demonstrates writing skills that may show moderate development of topic/ideas and/or some errors in Standard English conventions that may interfere with communication. (Scaled scores:521–540.)

Does Not Meet the Standards—The quality of a student's written compositions at this level does not meet the standards of performance as identified for Maine's *Learning Results* in English language arts (writing). The student's work demonstrates writing skills that show limited development of topic/idea and/or many errors in Standard English conventions that interfere with communication of ideas. (Scaled scores:501–520.)

CHART F-3
HEALTH EDUCATION

Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in health education. The student demonstrates exemplary knowledge of content and skills related to health promotion and disease prevention including communication, decision making, analysis, and risk reduction. (Scaled scores:561–580.)

Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in health education. The student demonstrates consistent knowledge of content and skills related to health promotion and disease prevention including communication, decision making, analysis, and risk reduction. (Scaled scores:541–560.)

Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in health education. The student demonstrates partial and/or inconsistent knowledge of content and skills related to health promotion and disease prevention including communication, decision making, analysis, and risk reduction. (Scaled scores:521–540.)

Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in health education. The student demonstrates a limited knowledge of content and skills related to health promotion and disease prevention including communication, decision making, analysis, and risk reduction. (Scaled scores:501–520.)

CHART F-4
MATHEMATICS

Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in mathematics. The student's overall performance demonstrates exemplary knowledge of content, process, problem-solving, and communication skills. (Scaled scores:561–580.)

Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in mathematics. The student's work consistently shows complete knowledge of mathematical content, process, reasoning, and communication skills, as well as problem-solving abilities. (Scaled scores:541–560.)

Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in mathematics. The student's work demonstrates a partial and/or inconsistent knowledge of mathematical content, process, reasoning, and communication skills, and problem-solving abilities. (Scaled scores:521–540.)

Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in mathematics. The student's work demonstrates a limited knowledge of mathematical content, process, reasoning, and communication skills, as well as problem-solving ability. (Scaled scores:501–520.)

CHART F-5
SCIENCE & TECHNOLOGY

Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in science and technology. The student demonstrates exemplary knowledge of content including life, physical, and earth/space sciences and scientific inquiry, reasoning, and communication skills. (Scaled scores:561–580.)

Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in science and technology. The student demonstrates consistent knowledge of content including life, physical, and earth/space sciences and scientific inquiry, reasoning, and communication skills. (Scaled scores:541–560.)

Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in science and technology. The student demonstrates partial and/or inconsistent knowledge of content including life, physical, and earth/space sciences and scientific inquiry, reasoning, and communication skills. (Scaled scores:521–540.)

Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in science and technology. The student demonstrates limited knowledge of content including life, physical, and earth/space sciences and scientific inquiry, reasoning, and communication skills. (Scaled scores:501–520.)

CHART F-6
SOCIAL STUDIES

Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in social studies. The student demonstrates exemplary knowledge of content of major social studies concepts, consistently applies complex thinking skills, and communicates ideas clearly in all situations. (Scaled scores:561–580.)

Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in social studies. The student demonstrates consistent knowledge of content of major social studies concepts, usually applies complex thinking skills, and communicates ideas clearly in most situations. (Scaled scores:541–560.)

Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in social studies. The student demonstrates some knowledge of content of major social studies concepts, inconsistently applies complex thinking skills, and communicates ideas clearly in some situations. (Scaled scores:521–540.)

Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in social studies. The student demonstrates a limited knowledge of content of major social studies concepts, does not apply complex thinking skills, and communicates ideas clearly in few or no situations. (Scaled scores:501–520.)

CHART F-7
VISUAL & PERFORMING ARTS

Exceeds the Standards—The quality of a student's work at this level of proficiency exceeds the standards of performance as identified for Maine's *Learning Results* in visual and performing arts. The student demonstrates exemplary knowledge of content and application of skills of the visual and performing arts, including creative expression, cultural heritage, and criticism and aesthetics. (Scaled scores:561–580.)

Meets the Standards—The quality of a student's work at this level of proficiency meets the standards of performance as identified for Maine's *Learning Results* in visual and performing arts. The student demonstrates consistent knowledge of content and application of skills of the visual and performing arts, including creative expression, cultural heritage, and criticism and aesthetics. (Scaled scores:541–560.)

Partially Meets the Standards—The quality of a student's work at this level of proficiency partially meets the standards of performance as identified for Maine's *Learning Results* in visual and performing arts. The student demonstrates partial and/or inconsistent knowledge of content and application of skills of the visual and performing arts, including creative expression, cultural heritage, and criticism and aesthetics. (Scaled scores:521–540.)

Does Not Meet the Standards—The quality of a student's work at this level of proficiency does not meet the standards of performance as identified for Maine's *Learning Results* in visual and performing arts. The student demonstrates limited knowledge of content and application of skills of the visual and performing arts, including creative expression, cultural heritage, and criticism and aesthetics. (Scaled scores:501–520.)

STANDARD SETTING METHODS

There were two standard setting methods used for the MEA: the Body of Work (BoW) method (Kingston, Kahl, Sweeney, & Bay, 2000) and the Contrasting Group (CG) method (Livingston & Zieky, 1982). Threshold scores resulting from the two methods were aggregated to obtain the minimum scores for each performance level.

The two methods and their implementations are described in the following sections. The threshold scores that were recommended to and accepted by the DOE are also presented.

CONTRASTING GROUP (CG)

The contrasting group method is based on the notion that examinees can be divided into two contrasting groups (Livingston & Zieky, 1982). For example, for the MEA these two groups could be the group of examinees that meets the standards (this includes those who exceed the standards) and the group of students that does not (this includes those who partially meet the standards and those who do not meet the standards).

Prior to the implementation of the BoW standard setting method, student rosters were sent to select schools with a request for teachers to assign performance levels to selected students in different content areas. The instructions given to the teachers were as follows:

1. Carefully review the Maine *Learning Results* for this content area.
2. Carefully review the performance level definitions.
3. For each student listed, indicate the performance level that matches the student's achievement of the Maine *Learning Results*. (1 = Exceeds the Standards; 2 = Meets the Standard; 3 = Partially Meets the Standard; 4 = Does Not Meet the Standard)
4. Return the completed form to your building principal.

Included in the instructions is the information that the task of assigning performance levels was to be performed by the teacher who is currently teaching or who most recently taught this content area to the identified student. Teachers and principals involved in this study were told that information collected would be used along with information collected during standard setting sessions on July 26-29, 1999, to establish the performance level cutscores for the MEA.

A total of 73 schools in Maine were selected and asked to participate in this study: 44 for grade 4, 12 for grade 8, and 17 for grade 11, across the six subject areas. The number of students selected for this study for each grade level and subject combination is presented in Table F-1. These are the numbers of students that teachers have to assign to different performance levels.

Data collected from this effort were analyzed to obtain threshold scores for each performance level in each grade and content area. These thresholds were combined with thresholds resulting from the BoW method to obtain the final thresholds recommended to the DOE. The method of combining the thresholds is discussed later in this chapter.

Table F-1
Number of Selected Students for the Contrasting Group

Subject	Grade 4	Grade 8	Grade 11
Reading	330	340	328
Mathematics	328	326	338
Science and Technology	314	333	330
Social Studies	315	330	330
Health Education	312	332	357
Visual and Performing Arts	310	379	381

BODY OF WORK (BOW)

On July 26-29, 1999, panels were assembled for the implementation of the Body of Work (BoW) standard-setting method. The hallmark of the BoW method is that panelists examine complete student response sets (student responses to multiple-choice questions and samples of actual student work on constructed-response questions) and match each student response set to one of the MEA performance level categories. This is done in three major steps: (1) training/calibration, (2) range finding, and (3) pinpointing.

TRAINING/CALIBRATION

During this first phase of the MEA standard-setting process, panelists reviewed all MEA test questions for their assigned content area and grade level, and content- and grade-specific descriptors for each performance level. Panelists were given the opportunity to discuss and comment on test

questions and descriptors. Next, to ensure that panelists attained a common interpretation of performance descriptors and the relationship of those descriptors to student work, panel members individually assigned performance levels to a set of six sample student responses. Panelists then compared their individual results and discussed at length how the performance level descriptors supported their conclusions.

RANGE-FINDING

During the range-finding phase of standard setting, identical sets of student work that spanned the score continuum were provided to each panelist. Panelists were asked to independently categorize the sets as Exceeds the Standards, Meets the Standards, Partially Meets the Standards, or Does Not Meet the Standards, based on the performance level descriptors. This process revealed which levels of student work generated the most agreement and which generated the most disagreement among panelists. The results were documented, and the levels of the sets of work that generated the most disagreement defined the score intervals in which the threshold scores must fall.

PINPOINTING

Additional sets of student work from score ranges that generated disagreement were presented to panelists. Panelists assigned performance levels to these sets of responses. The minimum score for each performance level was precisely pinpointed by determining the score around which there was, collectively, the maximum disagreement between panelists. This is the point that best represents the transition from response sets at a higher level to those at a lower level.

PANELISTS

Twenty-one panels were convened to set performance standards for the MEA—one panel for each grade level (4, 8, and 11) in seven areas—(1) reading, (2) writing, (3) mathematics, (4) science, (5) social studies, (6) health, and (7) visual and performing arts. The panels were composed of educators, parents and business leaders, and members of the general public.

IMPLEMENTATION

Following is a detailed description of the steps followed in implementing the MEA BoW standard-setting design.

BEFORE THE MEETING

1. For each subject-grade combination (e.g., grade 8 mathematics) pinpointing folders were prepared from samples of student work. This sample was double-scored to increase the accuracy of the standard-setting process. Any students whose body of work was of uneven quality (for example, some constructed-response questions with scores of four and others with scores of one) were excluded, as were students whose open-response and multiple-choice responses were particularly discrepant. Folders ranged in scores from the highest obtained score in the remaining sample to the "approximately chance level" (0.25 times the number of multiple-choice items plus one times the number of constructed-response items). Each folder consisted of five sets of student work at each of four score points (e.g., five 12s, five 13s, five 14s, and five 15s), with the exception of the top folder (folder with highest scores). The top folder differed because there often were fewer than five papers available at any particular score point. Thus, the twenty papers in the top folder covered a wider range of scores. Approximately ten pinpointing folders were created for each content-grade combination.
2. Range-finding folders were prepared from the pinpointing folders. The highest-scoring and two lowest-scoring papers were selected from each pinpointing folder. Thus, range-finding folders had about thirty samples of student work in each.
3. For each content-grade combination, six student response sets spanning the range of performance were identified from the pinpointing folders. The facilitator reviewed the sets and prepared training notes consisting of points to be made during discussion of those student response sets.

Focus was on ways responses illustrate characteristics described in the performance level definitions.

4. The Maine Department of Education created a list of members of each panel (one panel per subject area, four subject areas per grade, and three grades), ensuring each group had the proper diversity of membership (educator, parent, policy-maker, businessperson, ethnicity, gender, etc.). Color-coded name tags were provided to panel members.

GENERAL MEETING

Before the panels broke into separate groups, there was a general session at which logistical issues were addressed and the standard-setting procedures explained by the chief of standard setting. Major steps of the panel meeting portion of the meeting were described.

PANEL MEETING

1. Facilitators distributed the descriptor of a four-point response to each constructed-response question. Panel members were asked to review and discuss the test questions—constructed-response and multiple-choice. (Panelists had been asked to answer the questions before the meeting, and they were to have brought with them the tests and the performance level definitions. Additional copies were distributed to those who needed them.)
2. The facilitators led a discussion of the performance level definitions.
3. Training folders were distributed to every judge. The multiple-choice display at the end of a set was pointed out. Facilitators explained that it too should be considered when judgments are being made about the student work.
4. Judges were asked to rank independently the six previously identified student response sets based on overall quality, keeping in mind the performance level descriptions. Each judge listed the six student serial numbers in rank order from high to low performance on a separate piece of paper.
5. While the judges rank ordered the six student response sets, the facilitator wrote the serial numbers of the six sets on an overhead transparency in a vertical list in order from highest

performance to lowest performance. When the judges completed their rankings, the facilitators showed the score rankings on the overhead projector and had the judges note the extent of agreement.

6. Judges were asked to assign each of the six response sets to a performance level. They each wrote the performance level initials (E, M, P, or D) next to the student serial numbers they listed in rank order in step 4 above.
7. Facilitators drew four columns to the right of the six serial numbers on the overhead transparency, and labeled the columns E, M, P, and D. Facilitators recorded the judges' ratings (based on shows of hands) next to the serial numbers on the overhead.
8. Facilitators led a discussion of the six response sets as they related to the performance levels.
9. The heterogeneous (range-finding) folders were distributed to every judge. The facilitators pointed out the multiple-choice display at the end of a set, and explained that it too should be considered when judgments are being made about the student work.
10. Facilitators distributed a Range-Finding Rating Form to each judge, and asked the judges to enter their names in the name boxes and encode a home telephone number in the "ID" field. Judges were given the opportunity to reconsider their ratings of the six student response sets and transfer their "final" ratings to the Range-Finding Rating Form on which the serial numbers for these and other response sets in the heterogeneous folder had been entered in order from high to low performance.
11. Judges were asked to decide independently the performance levels of the rest of the sets in the heterogeneous folder and record their ratings on their Range-Finding Rating Forms in the left set of columns.
12. Judges' ratings were recorded on the "Range-Finding" overhead transparency, based on shows of hands. Judges were asked to view the overhead and decide if they wanted to change their minds

regarding any of the student response sets. Group discussion was allowed. Changed ratings were recorded in the "Second Ratings" columns of the Range-Finding Rating Form.

13. When the judges completed step 12, their materials were collected. From these data, the chief of standard setting determined the pinpointing folder or folders that must be evaluated by the judges for determining each of the three cut points.
14. For each pinpointing folder, the decision to be made for each folder was indicated, e.g.,

    Folders 3 and 4—E or M?

    Folders 9 and 10—M or P?

    Folder 15—P or D?
15. The group of judges was divided into thirds. Each small group examined the folder or folders for one cut score[6]. Each judge independently completed a Pinpointing Rating Form, including the name boxes and ID field, for each folder he or she was assigned. Materials were rotated so all three small groups examined the folder or folders for every cut point.
16. All standard-setting materials (ranking sheets, forms, folders, tests, definitions, etc.) were collected and returned to the chief of standard setting.

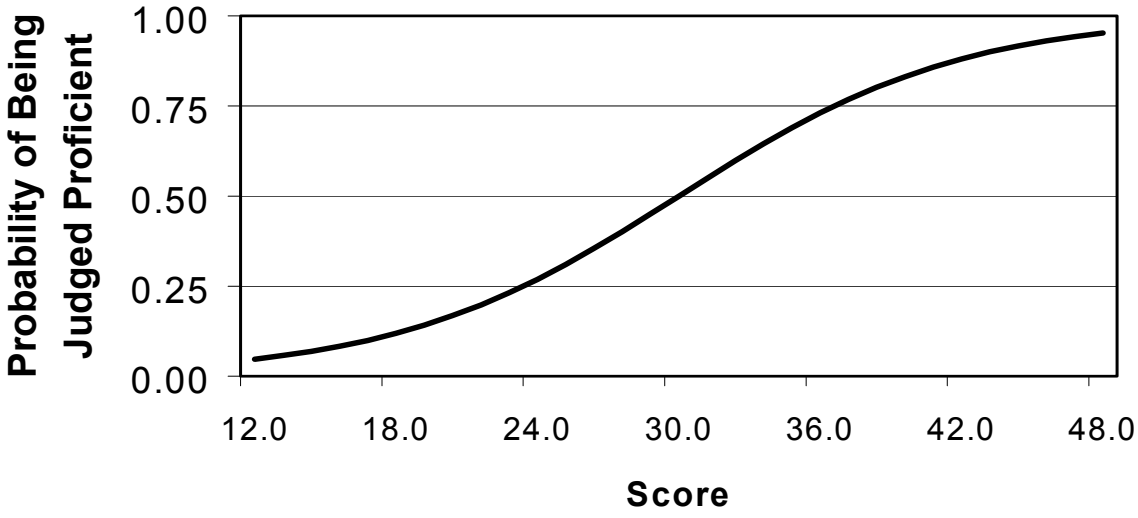
As panelists turned in their materials, they were given an evaluation form to fill out and were invited to return later to see a summary of the results.

[6] The purpose of dividing the group into thirds was to reduce the need for multiple copies of folders. This way, each group worked with one-third of the folders, finished the work on one cut score, and then passed the folders to the next group for them to do the same.

DATA ANALYSIS

Data collected from CG and BoW were analyzed separately using logistic regression. Using data collected through each method, a separate logistic regression was run for each threshold decision. The unit of analysis for the CG data was a teacher's decision regarding each student. For the BoW data, the unit of analysis is a panelist's decision about a single student's body of work. Test scores were used to predict the probability of a student's work being classified as meeting or exceeding each performance level. Figure F-1 provides a graphical example of the results of a logistic regression.

Figure F-1
Graphical Example of Logistic Regression Results



Note, in Figure F-1, it is at a test score of thirty that the probability of being judged Meets the Standards is 0.5. Thus, thirty would be the minimum score at which a student would be considered Meets the Standards.

A separate regression analysis was done for each performance level for each grade and subject combination based on each set of collected data from CG and BoW methods. Each threshold

score computed was associated with a standard error. Standard errors were estimated by applying the logistic regression technique separately to each panelist's or teacher's data. Thus, for each threshold decision, there was a distribution of estimated thresholds. The standard error was estimated as the standard deviation of the distribution divided by the square root of the number of panelists (for BoW) or teachers (for CG).

RESULTS

Threshold scores resulting from each method were presented to the DOE along with their associated standard errors as described above. A decision was made to combine the corresponding thresholds and smooth them across grades. The following steps outline the manner by which the final cutpoints were computed.

1. Based on the actual distribution of scores of students who took the tests, each cutpoint was converted to a z-equivalent score.
2. The z-equivalent scores of the BoW and CG cutpoints were combined by computing the weighted average (BoW:CG::2:1). This was done for each pair of performance level thresholds for each content area for each grade.
3. The corresponding z-equivalent cutpoints for each content area for each performance level were "smoothed" across grades. This was done by computing the 4:1:1 weighted average of grade level cutpoints, where the cutpoint for the grade of interest is weighted four times as much as the cutpoints for the other two grades.
4. The resulting cutpoints (which are in z-equivalents score metric) are then converted to the raw score metric.

Table F-2 presents the final threshold determinations that were used to report results from the 1999 administration of the MEA.

Table F-2
Threshold (Minimum) Total Test Score For Each Performance Category

Grade	Content Area	Maximum Score on Test	Threshold Score		
			Exceeds the Standards	Meets the Standards	Partially Meets the Standards
4	Reading	53	46.60	33.72	21.30
	Mathematics	41	36.19	26.07	15.73
	Science and Technology	41	33.69	27.33	13.75
	Social Studies	39	32.16	25.31	17.44
	Writing	30	26.64	18.56	9.91
	Health Education*	28	16.67	13.27	7.82
	Visual and Performing Arts*	28	13.75	10.35	6.81
8	Reading	52	44.91	33.10	21.14
	Mathematics	41	37.30	24.40	12.23
	Science and Technology	41	33.71	25.99	16.03
	Social Studies	41	31.66	23.63	14.38
	Writing	30	27.21	18.09	10.91
	Health Education	28	20.37	13.15	5.68
	Visual and Performing Arts*	28	18.46	11.24	6.75
11	Reading	53	47.93	37.09	23.38
	Mathematics	41	36.01	24.37	12.83
	Science and Technology	41	34.27	26.22	13.48
	Social Studies	39	30.66	21.00	12.76
	Writing	30	26.96	20.12	12.09
	Health Education*	28	19.58	13.75	4.77
	Visual and Performing Arts*	28	20.18	14.59	9.50

*Information presented is based on the particular test forms used in standard setting.